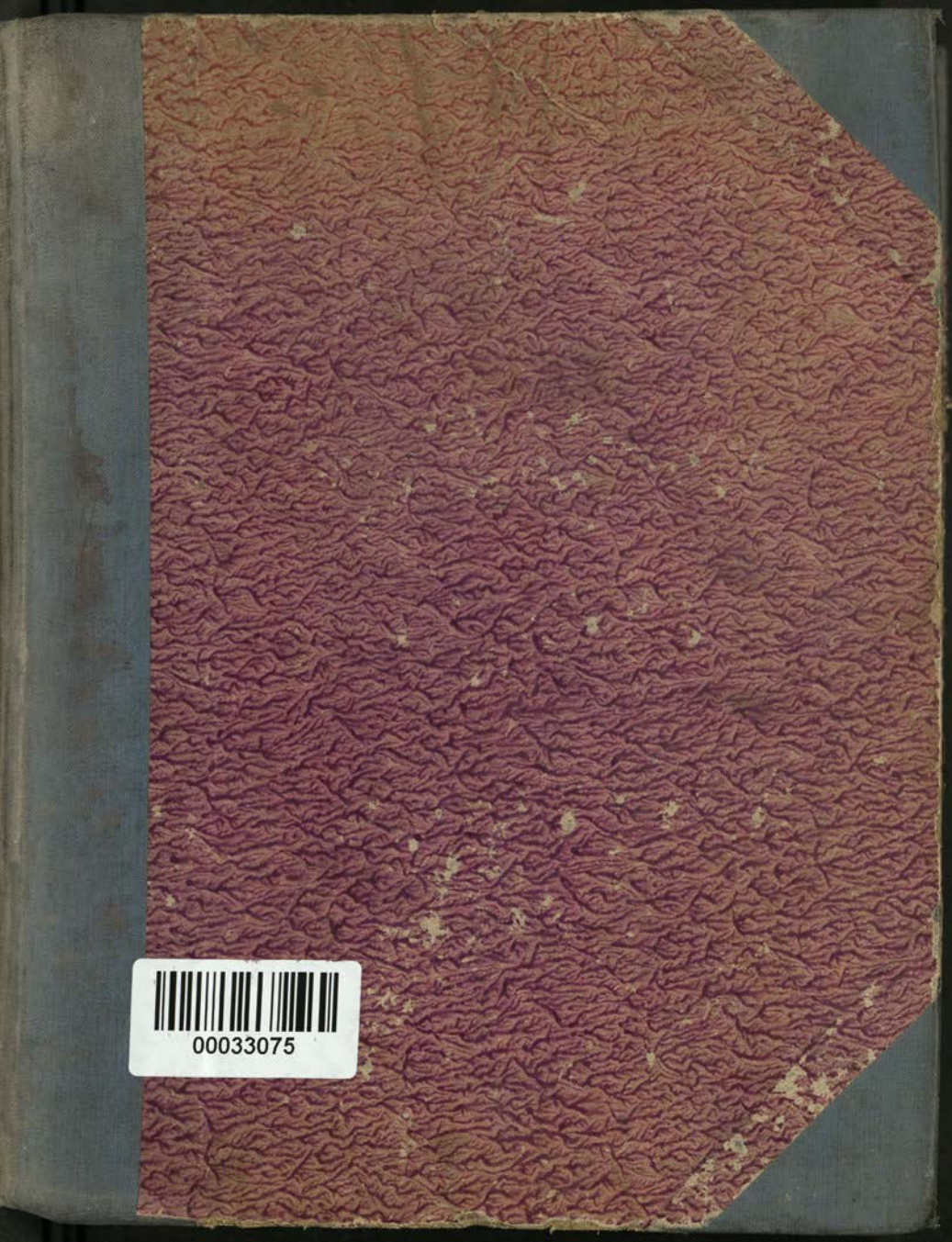
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NARRATIVE OF A JOURNEY

IN THE INTERIOR OF

CHINA,

AND OF

A VOYAGE TO AND FROM THAT COUNTRY,

IN THE YEARS 1816 AND 1817;

B2961

CONTAINING

AN ACCOUNT OF THE MOST INTERESTING TRANSACTIONS

OF

LORD AMHERST'S EMBASSY TO THE COURT OF PEKIN,

AND

OBSERVATIONS ON THE COUNTRIES WHICH IT VISITED.

AA-a 16

BY CLARKE ABEL, F.L.S.

AND MEMBER OF THE GEOLOGICAL SOCIETY,

CHIEF MEDICAL OFFICER AND NATURALIST TO THE EMBASSY.

ILLUSTRATED BY MAPS AND OTHER ENGRAVINGS.

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TO THE

RIGHT HONOURABLE

LORD AMHERST,

&c. &c. &c.

MY LORD,

THE high situation held by Your Lordship as head of *the* Embassy of which these pages contain some account, will, in the public mind, point out the propriety of the present Dedication. Permit me to declare that this consideration has less influenced me than the desire of publicly thanking Your Lordship for your sanction and support to my scientific pursuits, and uniform kindness *to myself.*

I am, My Lord,

With the greatest respect,

Your Lordship's

Obliged and obedient humble Servant,

CLARKE ABEL.

London, July, 1818.

PREFACE.

I HAVE laboured under great difficulties and many discouragements in preparing the following pages for the press. A narrative, having for its principal subject a journey through the interior of China, must derive its interest either from the novelty and importance of the incidents which it relates, or from the quantity of original information which it contains respecting that singular country. In both these respects I am in a great degree anticipated. The tale of the Transactions of Lord Amherst's Embassy has been too well and too circumstantially told by an official pen to leave me much expectation of finding public curiosity unsatisfied respecting them. The close delineation of that part of the country equally visited by Lord Macartney's and Lord Amherst's Embassy, contained in the accurate and laboured work of the late Sir George Staunton, has left very little to tell respecting it, and the production just alluded to has in a great measure described what was exclusively seen by the latter. The work that had for its object the establishing "*the point of rank which China may be considered to hold in the scale of nations,*" has so exhausted the topics which in this view might be dwelt upon, and has so illustrated them by the writings of the Missionaries, as almost to preclude the hope of a further elucidation of the same subjects from similar sources of information.

LIBRARY ... BRANCH OF THE ASIATIC

I am in scarcely less difficulty respecting the natural history of the countries which I have visited. Sickness abridged, and shipwreck almost annihilated the materials which would have afforded extensive scientific communication respecting China. My illness, indeed, was comparatively of little importance, except as it prevented my observation of the country; for the exertions of my friends more than compensated the loss of my individual efforts in making collections. But the shipwreck deprived me of all the fruits of those means which the wisdom and liberality of the East India Company placed at my command; and has only left me the duty of stating, in justice to others, what was the nature of those means, and something of the results to which they led.

My appointment to the Embassy was at first simply medical; but through the recommendation of Sir Joseph Banks to the East India Company, I was permitted to take upon me the office of Naturalist, and received an ample outfit of all the apparatus for scientific research. To give greater effect to my exertions in collecting and preserving the vegetable productions of the countries to be visited by the Embassy, a botanic gardener, from the Royal gardens at Kew, taking out with him a plant cabin, for the preservation of living specimens, was placed under my directions; and to assist generally in my pursuits my brother-in-law, Mr. Poole, was allowed to attend me. With such facilities, it would have been strange, even in countries often trod by scientific men, if I had not gleaned some new and important facts. But in China, scarcely touched by the foot of the naturalist, nothing short of a rich harvest could have been received as a token of my due exertions. The proofs of what these were, of their efficiency or abortiveness, are buried in the straights of Gaspar. But it is incumbent on me to bear testimony to the exertions of Mr. Hooper, the Botanic Gardener, whose industry was equally unremitting and availing. His more peculiar department having been to collect and preserve seeds, he placed, on our leaving China, three hundred packages,

in my keeping, many of which were taken from plants of undescribed genera, and by far the greater number from unknown species. They formed part of the shipwrecked collection.*

From the kindness of Sir George Staunton, to whom I gave a small collection of China plants, and of Captain Basil Hall, to whom I gave a small collection of China rocks at Canton, I have derived all the specimens which have enabled me to give the slight geological and botanical notices of China contained in this work. To the latter gentleman, and to his friend, Mr. Clifford, I am also under other obligations of an important kind; and in naming them, have to mention the loss of collections equalling my own in value. In taking leave of the Embassy on its disembarkation in the Gulf of Pe-tche-le, they took charge of a case of bottles with spirit, for the purpose of preserving any interesting marine animal production which might fall in their way; and the necessary means for the preservation of plants. On rejoining the Embassy five months afterwards, they presented me with a collection of Zoophytes and an extensive collection of plants from the Lew-chew Islands. These also perished with the Alceste, but do not complete my catalogue of losses. A fine collection of madrepores made by Capt. Maxwell may be added to them, and will still leave it unfinished. Whilst the Alceste and Lyra explored the Corean coast and the Lew-chew islands, the other ships of the Embassy visited the coast of Tartary. Lieut. Maughn, of the East India Company's service, went with them, and having taken directions as to the mode of preserving dried specimens of plants, surprised me on my arrival at Canton with an extensive geological and botanical collection from the coast of Tartary. These, encreased by a collection which had been made from the same part of the world, for Mr. Livingston, one of the surgeons to the British factory at Canton, and which I received from the kindness of that gentle-

* After leaving the wreck of the Alceste, I had the mortification of hearing that the cases containing these seeds had been brought upon deck and emptied of their contents by one of the seamen, to make room for some of the linen of one of the gentlemen of the Embassy.

man, were also placed in my possession, and shared the fate of my other specimens. But I should fatigue the patience of my readers without doing justice to my own feelings, if I attempted to state all that I owe to the kindness and exertions of my friends and all that they have left me to regret.

After these declarations respecting the loss of materials which would have given value and interest to these pages, what, it may fairly be asked, have I remaining of importance to the public? In looking over my observations on the countries that I had visited, I was of opinion that they contained something to interest, and something to inform. It is not for me to judge how far I may have correctly estimated the value of my matter; but I trust that the exclamation of the Poet,

"———————ibi omnis,
"Effusus labor."

will not entirely apply to my pages. I have endeavoured to describe things as I saw them; and when subjects arose incidentally from my narrative, have tried to give them an extrinsic interest by noticing the opinions of others and comparing them with my own. In doing so, I have respected the freedom of my own mind, and have never hesitated to express my thoughts, even when they differed from high authority. I trust that my language has, on these occasions, expressed the deference of my feeling. If, however, it should not always be found exactly suited to my purpose, I beg that my readers will charitably attribute it to my little experience in the niceties of speech. Indeed, it is in what concerns the style of this work that I am especially anxious to bespeak their indulgence. Little practised in composition, I have been desirous to give my own thoughts in my own words, and in doing so have not, I fear, benefited the language of these pages, and have delayed them longer than the merit of their contents may seem to have deserved. In what regards my facts and conclusions I cannot feel much apprehension: the first are, to the best of my judgment, strictly stated, and

the last were drawn because they seemed to follow the premises, and if they be not adopted will only have the fate of others better than themselves.

In making acknowledgments it seems almost superfluous to state that I am under the deepest obligations to Sir Joseph Banks, whose support to my scientific views was the natural consequence of their being laudable and useful. In leaving England I carried with me his instructions respecting the objects to be kept most closely in view during my absence, and since my return have derived from the freest access to his library and herbarium all possible facilities in constructing this work.

Of the assistance of Robert Brown, Esq. the following pages bear sufficient evidence. His description of a new genus, which, in friendly partiality, he has named *Abelia*, and of two new species of plants, the one leading to the establishment of a new natural order, and the other fixing the place in the natural method of a genus hitherto of doubtful affinity, gives unequivocal value to my Appendix.

To Mr. Morrison's journal I owe in a great measure the short account of the progress of the Embassy during the period of my illness, and some interesting notes respecting transactions from which I was absent. Some of these notes would have been incorporated with the text had I possessed the journal at an earlier period. To Mr. Cooke's journal I have been also much indebted, and to the same gentleman I owe two drawings which illustrate the book. The drawings of the Quercus Chinensis and Eurya Chinensis are from the tried pencil of my friend W. Hooker, Esq. To Mr. H. Raper, an officer of the Alceste, I am indebted for all the geological views, except two, of the Cape of Good Hope, taken on the spot, and possessing not their least value in their minute accuracy. The plate of the temple of Quong-ying is from a sketch which I obtained from the kindness of Sir George Staunton. The other drawings, not bearing the names of professed artists, I am answerable for.

For that part of the "Chart showing the track of the Alceste," which gives the line of the Corean coast and the Corean archipelago, I have to thank the Rev. Mr. Taylor, chaplain of the Alceste. The more general map of China, and the map of the route of the Embassy on the Yang-tse-kiang, are reduced from the great map of the Jesuits. My object in giving the former has been to convey to the reader some notion of that very peculiar character of the country, which arises from its universal intersection by navigable rivers and canals, as well as to show the whole route of the Embassy. Its accuracy of course depends on that of the Jesuits, which we had no opportunity of verifying, but had no occasion to suspect. It so far, however, differs from the map of the Missionaries in containing the names of a greater number of places in the line of our route than the original, and in having the nature of the banks of the rivers passed over by the Embassy marked upon it, when this could be done without producing confusion by crowding the letter-press. The same observations apply to the map of the Yang-tse-kiang and Po-yang lake.

The meteorological tables contained in the Appendix, although very imperfect, will be thought perhaps to have merited insertion as adding to the very few facts that we already possess regarding the atmospherical phenomena of a part of the world so little known. I have scarcely as much to say for the Itinerary of our route. It is of some consequence in reference to the maps, and in containing distances extracted from a Chinese Itinerary: an excuse for its insertion may be found in the small space which it occupies.

In conclusion, I must not forget to point out the fidelity with which the engraver, Mr. Fielding, has executed his department of the work, or to acknowledge the interest he took in the progress of it, and his anxiety that the accuracy of his pencil should correspond with the nicety of my own wishes in subjects not so frequently under the eye of an artist.

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APPENDIX 331

EMBASSY TO CHINA.

CHAPTER I.

DEPARTURE FROM PORTSMOUTH.

At three o'clock of the afternoon of February 8th, 1816, I embarked with His Excellency Lord Amherst, on board H. M. S. Alceste, then lying at Spithead. Getting under weigh at eight o'clock the following morning, in company with H. M. S. Lyra, Capt. B. Hall, and General Hewitt, Capt. Campbell, we steered with a fine breeze through the Needles. In passing the shores of the Isle of Wight, my imagination dwelt painfully on its white cliffs and verdant slopes, which but three days before I had visited with friends who gave the best value to my existence, and from whom I was separating, perhaps for ever. But the painful feelings excited by such reflections, too intense, indeed, for long continuance, were quickly destroyed by my share of the bodily suffering which attacked, in succession, the greater number of those, who then, for the first time, felt the motion of a ship at sea. Scarcely had we cleared the western extremity of the island, when an intolerable giddiness, languor, and sickness, drove me to my cot, and had but slightly mitigated, when the mountains of Madeira were descried from the ship.

Early in the morning of the 18th February, going upon deck, I saw this interesting island bearing S. S. W., distant about six leagues.

A thick white cloud covered its mountains, which gradually dissipating as we advanced, disclosed their snowy summits beautifully contrasting with the dark foliage of their declivities. The squadron hove to about ten o'clock in the forenoon, off the town of Funchal, at the distance of two or three leagues from the land.

Having prepared every thing for collecting objects of natural history, I waited impatiently for the appearance of a boat, to carry me to the fulfilment of my anticipations. Examining with my glass the aspect of the rugged shores, I exulted in the geological interest of their appearance, and collected, in imagination, plants which, from number and rarity, would give a long and delightful employment. What then was my disappointment, when I was informed by His Excellency, that he wished no one to leave the ship, lest any chance of delay should arise to the sailing of the Alceste, as soon as she had obtained the necessary supplies. As Lord Amherst denied himself, for public reasons, the pleasure which he much desired, of visiting the island, no one of his suite had a shadow of right to remonstrate, and I prepared to suffer my disappointment with all possible patience. After the lapse, however, of two or three hours, Capt. Campbell, of the General Hewitt, came on board, and offered to take me on shore; and, being almost immediately to return, I readily accompanied him.

On approaching the beach, where I had hoped to find some specimens of sea-weed, I found the depth of water up to the shore so great, that a vessel might almost anchor with her bowsprit over the land, and consequently, that no marine production was to be met with. The beach is made up of large rounded fragments of lava, generally of a vesicular structure, very ponderous, and of a bluish colour. Landing to the westward of the town, I found a mountain torrent, having its bed sides formed of huge masses of volcanic matter, as far as the eye could follow its romantic windings. I entered its bed in search of plants, but found very few, as the apprehension of losing my chance of returning to the ship prevented my looking very narrowly. The Fumaria Parviflora, which was growing in great

abundance in all the crevices of the rocks, and a few geraniums, ferns, and mosses, composed my collection.

Not finding the boat in readiness on my return to the beach, I walked into the town, which I entered under an archway that led to a long narrow street very well paved with round pebbles, and perfectly clean, and which was intersected by others of a similar character. The houses are lofty, and completely overshadow the narrow streets, forming an effectual screen against the beams of a hot sun. The softer sex, for here they cannot be called the fair sex, were enjoying the air on virandas which projected from the first floor of the better-looking houses, and were enabled by the narrowness of the streets to converse freely with their opposite neighbours. The young ladies of Madeira, although dark brunettes, possess many charms. Their hair, and arching eye-brows, are of a jet black, and their eyes sparkle under lashes of the same colour; their face is oval and expressive, and handsome rather than beautiful.

The streets were filled with foot passengers, of whom no inconsiderable number were priests, in long loose robes, and without hats. They had evidently fared on the fat of the land; and many of them exhibited in their countenances and deportment, a full share of self-satisfaction and self-importance. But the faces of others seemed to be lightened with a paternal feeling, and physiognomists might have traced in them characters of mildness, benignity, and religion. Neither did they all receive the same marks of respect from the passing populace. Sometimes the hat was simply raised, and the body bowed, without any regard being directed to the object of this salute, which was begun and ended at the instant of meeting. In other cases, an eagerness was shown to catch the observation of the Father, long before he approached, while a deprecating and beseeching manner appeared to implore the blessing of a superior being. It was agreeable to the harmony of my own sentiments, that these last attentions were paid to those alone, whose exterior almost incited me to a similar display of respectful feeling.

On quitting the town, I was disposed to conclude, that it had been much improved since it was visited by its last describers; but as it was Sunday when I was there, and all classes were enjoying the leisure of the day in their best apparel, and as first impressions are frequently erroneous, I shall confine myself to the remark, that what I saw did not correspond with what I had read.

When I reached the Alceste, I found that I might have remained on shore several hours, as some circumstances had occurred, which prevented her immediate sailing; and she did not leave Funchal Roads till the evening, when we got under weigh with a fine breeze.

As we proceeded on our voyage towards the Line, the tedium of our situation was in some measure relieved, by the amusement we derived from observing the habits of the flying-fish, which continually surrounded us. This animal, equally interesting in its structure, and in the circumstances of its persecuted life, has been so often the theme of the traveller's description, that its very mention comes with the heaviness of a twice-told tale. Yet, although its descriptions are numerous, much is still wanting to the completion of its natural history; and it is a subject of regret with naturalists, that its species met with by voyagers, are not ascertainable. For these reasons, and because "nature is an inexhaustible source of investigation," I shall state the few observations which I made on a specimen that was brought me on the morning of the 27th February, when in lat. 10° 38′ N., and 25° 47′ W. long.; and I do this the more readily, as its characters did not entirely accord with the description of any other species.

The colour of its back was a deep blue, which passed on its sides into a yellowish green, terminating in a silvery white, which, near its tail, had a pinkish hue. Several small patches of white reached from above its eye, to the pectoral fin. Its fins were six in number; two pectoral, two ventral, one caudal, and one dorsal. The pectoral fin consisted of fourteen rays, and was five inches in its greatest length, and as much in its greatest width. The two undermost rays, when the wing was expanded, were very short, and scarcely distin-

guishable from those next them, and the uppermost ray was the longest. Each ventral fin consisted of six rays, and was situated immediately behind the insertion of the pectoral fin. The dorsal fin, the rays of which were so indistinct that I cannot venture to state their number, had its origin about two-thirds down the back. The caudal fin was an inch long, and terminated at the setting on of the tail.

From the above description, it will appear that my specimen resembled the Exocætus Volitans in the position of the ventral fins, but differed from it in colour, which in the latter is brownish red on the back. It agreed with Exocœtus Exiliens and Mesogaster, in its general colour, but differed from them in the position of its ventral fins. It was distinguished from them all by the position of its dorsal fins. Should these differences be considered sufficient to establish it as a new species, I would propose to call it Exocœtus * Splendens, from the brilliancy of its colours.

The species which I have just described is furnished with as ample means of supporting itself in air as any of its congeners. Its air-bladder reaches from the pharyngeal bones along the spine to the extremity of its body, occupying eight-tenths of its whole length. The widest part of the air-bladder is situated immediately in front of the pectoral fins, and it tapers gradually towards the tail. It is equal in bulk to about *four-tenths of the whole fish.*

A *particular* purpose seems to be answered by the greater dimension of the air-bladder near the head, namely, the compensation of the great gravity of the animal at this part in consequence of its breadth. This compensation is necessary to the support of the animal's body in the air in a favourable position for flight. The situation of the pectoral fins before the centre of gravity in this, as in other flying-fish, also tends to elevate the head, as remarked by Lacépède.†

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* If the white spots on its head be peculiar, Exocœtus Maculatus would be a better name.

† Histoire Naturelle des Poissons, vol. v. p. 406. Lacépède has made the situation of

It has been stated by a naturalist * of the highest eminence, that the pectoral fins of the flying-fish serve only as a parachute, and by another † that "the animal beats the air during the leap, that is, it alternately extends and closes its pectoral fins." With this last observation my own experience perfectly agrees. I have repeatedly seen the motion of the fins during its flight, and as flight is only "swimming in air," it appears natural that these organs should be used in the same manner in both elements. The flying-fish is also much nearer in conformation to the bat, which supports itself in the air by repeated percussion, than to the flying squirrel, and other animals, whose structure only enables them to fall slowly. I may also remark, that when the fin of the flying-fish expands, its rays do not open in the same line, but describing a curve strike the air with repeated impulses.

I found it impossible to satisfy my mind with any probable conjecture respecting the greatest space through which these fish can support themselves in air, but I have seen them fly without once touching the water for fifty seconds, and my eye could not follow them till they fell. I have little doubt that they take to the air, as well for pleasure as to escape their enemies, since they were often seen rising about the ship in all directions, when no foe was visibly near, and when they had not been disturbed by the ship's motion through the water. Indeed I have been disposed to think myself unfortunate in not witnessing, during the whole voyage, a single flying-fish taken by a frigate-bird, or dorado; and I therefore venture to hope that these poor animals are not so persecuted a race as travellers have been led to imagine.

It is impossible to reflect on the habits of the flying-fish without considering its power of respiring in air. In treating of the respir-

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the dorsal fin opposite to the anal fin an essential character of the genus Exocœtus. Is it a universal character, or is the situation of the dorsal fin in my specimen a mere exception to a general law?

* Cuvier, Règne Animal, tom. ii. p. 188.

† Humboldt, Personal Narrative, vol. ii. p. 14.

ation of fishes, the possibility of their air-bladder acting subsidiarily to the branchiæ, has not passed unnoticed by authors; but I am not aware that this organ in the flying-fish has been pointed out as likely to assist the respiration of that animal out of the water. And yet I had once flattered myself with the belief that I had discovered its communication with the mouth under such circumstances of organisation as precluded any doubt of its aiding the function of aerial respiration. But I had only one opportunity of dissecting the animal when recently taken, and I dare not trust to a single observation. I would recommend however those, whose opportunities are frequent of possessing the flying-fish soon after death, to examine attentively the termination of its air-bladder at the pharyngeal bones. These bones, in all other fish * which I have examined, are two in number, and much apart, their office being to assist deglutition and to shield the blood-vessels which ramify under them on their way to the branchiæ. In the flying-fish their number and position is different, allowing the inference that their function is also different. They are in this animal four in number, two large and two small. The two former in close apposition are situated immediately above and behind the anterior orifice of the œsophagus, and are compressed by the latter, which are united to them by a strong elastic membrane. Muscles are attached to the larger bones so as to separate them by their contraction. The anterior termination of the air-bladder is at the posterior portion of the larger bones. The question to be determined is, whether the air-bladder has an orifice at this part, which is opened and closed by the separation and re-union of the pharyngeal bones.

On the evening of the 4th March we passed the line, and on the following morning shortened sail, to pay the usual homage to Neptune, which being accomplished we proceeded on our voyage.

* Since my return I have examined a specimen of the Exocœtus Mesogaster, preserved in spirit, in which the two large bones were united, but there was an orifice between them and the small ones; whether it led into the air-bladder or not I was unable to determine. The same specimen had only eight, instead of ten, rays to its branchiæ.

On the 10th, being in 10° 39′ S. Lat., and 32° 47′ W. Long., the Alceste parted company from the Lyra and General Hewitt, which shaped their course for the Cape, whilst the former steered for the harbour of Rio de Janeiro. On the 20th, we were off Cape Frio, and all those who had never before visited the shores of South America anxiously speculated on the scenes they were about to witness in the New World.

The affections of different minds on first approaching an interesting coast, might form a subject of curious and instructive speculation. When the land indeed appears but as a dark undefined speck in the distant horizon, first reflections cannot widely differ, although their vividness may depend on the sensibility of the individual, and their extensiveness on the number of his associations. But few educated men will approach a country for the first time of their lives, without reverting to the history of its conquest or discovery. On making the coast of the New World, so interesting in the history of man and of the earth, every thought must centre in Columbus. All the circumstances of his situation on the day of his discovery, all the attributes of his mind, and all the heroism of his conduct, array themselves in the imagination. But as the land developes itself, as its larger features become visible, speculation is extinguished in a general glow of undefined but delightful feeling. Never can I forget the pleasing, yet almost awful emotion of my mind, when rising early in the morning I first beheld the shores of South America expanded before me. To describe the scenery by words would be a vain attempt; the pencil of a painter enthusiastic in genius and in feeling, could alone convey to those who have never beheld it an imperfect apprehension of its grandeur.

As objects become still more defined and palpable, various trains of thought arise in different characters. In the commander of a British ship of war, the hope of finding refreshments for his crew, of meeting old friends, of carrying his ship into port in a skilful and gallant style, and of supporting the proud pre-

eminence of his flag, is perhaps on ordinary occasions the leading sentiment of his mind. — In many of his officers, an escape from subordination to the independence of a rove on shore, with all the importance really and in imagination attached to the character of a British naval officer, may be the chief pleasurable expectation. In one or two of them, indeed, very different feelings may arise. Habit sometimes acts so powerfully on a seaman's nature, that all his pleasing associations are of a nautical character, and whatever interrupts their train is to him a positive evil. To such a character the appearance of land, so dear to others, brings with it no pleasing emotion, and is irksome in proportion to his chances of delay. — The professor, or admirer of the pictorial art, dwells on the exterior characters of the scene, collects all the great traits by which a sublime picture is formed, and anticipates the interior beauties of the country of which he contemplates the outline. — The speculator on human character, varied by the modifying influence of climate, religion, and government, takes his own species as the subject of his examination. As the inhabitants of different classes appear, he combines them in an imaginary society, owing its character to his previous conclusions, but which he expects will be found consistent with reality. — Over all these, the naturalist has many advantages both with respect to pleasurable expectation and the chances of its fulfilment. The objects of his studies are infinitely numerous, and each in its simple relations is so completely a centre of observation, that he must always be repaid for the labour of research. On first entering the harbour of Rio Janeiro, he feels unutterable delight. No apprehension of disappointment darkens his prospect. The certainty of meeting Nature in her gayest and most exalted colours, in all her varied and attracted forms, gives him unmixed enjoyment. The brilliant tints of the mountain foliage feed his botanical imagination, whilst the dazzling insects which flutter about the ship tell to him the stores of animated nature. As a geologist, he may almost remain on the deck of the vessel and pro-

secute his labours. Immense ridges of primitive mountains, traversed by deep ravines, and rising in succession to the very boundary of his vision, afford him an ample subject of interesting investigation.

Long before the Alceste reached her anchorage, the firing of cannon at regular intervals announced the occurrence of some great public event, and as soon as we communicated with other ships in the harbour, we were informed of the death of the Queen of Portugal. Vessels of all nations that were at this time lying off St. Sebastian, showed their respect to the King of Portugal by crossing their yards, hoisting flags half mast high, and firing guns every five minutes. The Alceste followed their example; and as a farther mark of respect, the British Ambassador determined to appear on shore with some outward badge of mourning, and requested the gentlemen of his suite to do the same.

It was the afternoon before we anchored, and dark before I could gratify my impatience to visit the shore. The city of St. Sebastian has undergone so little alteration since it was described by Mr. Barrow, that any account of it which I could give from my limited means of observation would be superfluous. The darkness of the night prevented my seeing much of the inhabitants, but those who did fall under my passing notice were priests riding in their carriages, friars in procession, and ladies peeping from latticed doors. In company with some friends I hastened to the Caza de Pasto in the Rua D'Alfandaga, the best English hotel in the place, which, although it did not possess the comforts of a similar establishment at home, afforded no ordinary fare, and very civil treatment made us less fastidious respecting our entertainment. Having partaken of a supper at which we were supplied with tolerable claret at three shillings a bottle, we enquired for beds. The house contained no distinct bed-rooms and but few beds; but in a large billiard-room, with the assistance of the billiard-table, chairs, and sofas, our party, though numerous, mustered a sufficient number of separate resting places. The dread of musquitoes, the scourge of Europeans in hot

countries, did not disturb our repose, and we were glad to find in the morning that we had not suffered from their attack.*

I set out at an early hour on my return to the ship, and on my way through the town had an opportunity of taking a hasty glance at the morning employments of some of its inhabitants. Walking by the chief fountain which supplies the city, I was surprised at the great number of slaves who were waiting with vessels to receive in succession a measured quantity of water, and I witnessed the same scene at whatever hour in the day I passed this spot. St. Sebastian is badly supplied with this article, although numerous springs rise every where in its neighourhood within the distance of one or two miles. But the Portuguese in this country require some powerful and present necessity to rouse them to any great exertion, and it is less a matter of wonder that they suffer this inconvenience to exist, than that they ever should have attempted and completed so extensive a work as the aqueduct which supplies the city.

In passing the fish and vegetable market at the southern extremity of the town, every sense I possessed became disagreeably impressed. My hearing, by the jargon of the different languages used by the slaves who were bartering for their masters, and by the old women who were endeavouring to obtain the highest price for their articles of sale. My sense of sight and of smell, by a horrible combination of every sort of filth, which sent forth the most sickening effluvia that ever exhaled from the corruption of a charnel-house. The very air tasted of putridity, and my clothes felt unctuous to the touch from accidental contamination. Some of my companions who were old travellers felt disposed to joke at my squeamishness, and having bought a large quantity of fruit and fish, hired a canoe which carried us and our steaming cargo on board.

* A drought had prevailed at Rio for some weeks previous to our visit, which is always unfavourable to the propagation of these formidable insects. I have found that rubbing the skin with camphorated oil is the best protection against their attack.

On reaching the ship, I prepared every thing for making collections of plants, and set off in company with some friends on an excursion to the Braganza shore.* We landed at the foot of a small fort, which was in a state of as complete disservice as it is possible to imagine. The guns, from their rust and the rottenness of their carriages, could be formidable only to those who should attempt to discharge them. Yet as the war had but recently terminated, and this fort commanded an important part of the harbour, it might have been expected to be in a tolerable state of repair. From the fort we divided ourselves into different groups, and ascending the rocky hills that surrounded us, entered the woods which every where covered their summits. Taking a road which led through one of the thickest, I soon found myself encompassed by all the beauties of Flora. Sensations never before experienced, for some minutes, entirely overwhelmed me. It was the first time that I had ever seen the glorious productions of a tropical climate in their native soil. Plants, which in England are reared at great expense, and obtain under the best management but a puny and uncharacteristic form, flourished around me in all the vigour and luxuriance of their perfect being. A thick coppice was formed by numerous species of cassia cæsalpinia and bauhinia, whose gay colours and elegant forms were curiously contrasted with the grotesque characters of the aloe and the cactus. The trunks of the forest-trees were covered with beautiful creepers, and parasitic ferns occupied their branches. Emerging from the wood, I entered groves of orange-trees, bearing fruit and flowers in the greatest profusion. I approached them in wonder, and scarcely dared to taste their abundant produce, when I was astonished by receiving permission to gather them in any quantity; and this permission was not confined to myself, but granted to all my companions, who successively visited the place of their growth. Indeed, nothing could surpass the liberality of the proprietors of orange-groves, or of the Portuguese peasantry whom I

* The shore on the opposite side of the harbour to that on which the city of St. Sebastian stands.

met with in my different excursions in the neighbourhood of Rio. Whenever they could understand me they gratified my wishes in the most prompt and obliging manner. Having laden myself with plants, I returned in the evening along the rocky beach to my boat, walking at every step over land-crabs and the larvæ of insects, whose numbers gave an appearance of animation to the soil.

On the following morning I again visited the town; and, having procured horses, went with two of the officers of the Alceste on a visit to the Sugar-Loaf Mountain, but was unable to approach it very near. I ascertained, however, that it was surrounded by interesting scenery, and determined to revisit it by water the succeeding morning.

Returning from my ride through the city of St. Sebastian, I fell in with a group of négro slaves who were assembled at the corner of a street, listening with great delight to one of their own tribe playing on a very rude musical instrument. It consisted of a few wires fixed to a small square frame, placed over a large segment of the shell of the coco-nut. I requested one of his companions to accompany the instrument with his voice, which he immediately did, in a monotonous, though not unpleasing tone. Another performer accompanied the last notes by wild and expressive gesticulations, in which he was followed by most of the bye-standers. It was more than probable that national remembrances animated both performers and auditors. *Nothing* less powerful, surely, could excite the strong emotion which agitated their frames; and I was, in some measure, confirmed in this opinion by what followed. Having bought the instrument, I slung it on my arm, and rode with it through the streets to the English hotel. Every slave whose eye caught my appendage uttered as I passed a cry of surprise: it was also one of joy and exultation. His dark countenance assumed the liveliest expression, and his whole attitude marked the strong sensation excited by the appearance of a stranger, a white and a free man, bearing, perhaps, his national emblem, under such circumstances, reviving the recol-

lection of that liberty and that home from which he had been impiously and for ever torn. *

The number of slaves imported into Rio Janeiro has greatly increased during the last year, in consequence of the abolition which is to take place in five years, according to the treaty between the British and Portuguese governments. But although this effect of British interference in behalf of suffering humanity is much to be deplored, the great and beneficial alteration which it has produced in the treatment of its unfortunate objects more than compensates the temporary evil. With the view of obtaining a stock of slaves that may supply the wants of the colony when the trade in them shall have become unlawful, the Portuguese have adopted the measure of selecting from the market the most vigorous and handsome of the two sexes, and establishing them in pairs in different parts of their estates. The object of this plan is sufficiently obvious, and it will probably be obtained. Promiscuous and unrestrained intercourse has been much allowed among the slaves in Rio Janeiro, and experience has of course shown that it is unfavourable to population. Whilst a ready, cheap, and exhaustless supply was open, slave-owners cared very little about the best means of keeping up their stock by breeding; but they have been induced by the apprehension that the trade will become contraband at the expiration of five years, to attempt every possible method of increasing the number of their human cattle; and as this cannot be accomplished without attention to good feeding and general comfort, they will, probably, (without any better feelings on the score of humanity,) render the state of slavery more tolerable amongst them. I blush to observe the phraseology I use in writing of my fellow men, but I can in no other

* On the subject of the slave-trade in South America, I had collected some facts during my short continuance at Rio, which I had intended to give as illustrative of its extent, increase, cruelty, and impolicy; but I find in the lucid and ample details of Mr. Koster, so complete a developement of every circumstance which it involves, that any detail from me respecting it, would be equally useless and impertinent.

way express the relation which exists between the master and his slave.

It is affirmed that three-fourths of the population of St. Sebastian are blacks; and, indeed, their visible number is so great, that a stranger unacquainted with the slave-trade, and visiting this city, might imagine that the slaves were its proper inhabitants, and their masters its casual dwellers. He would also be liable to conclude that its municipal laws were not very effective, as he could scarcely traverse a street without meeting troops of Africans chained together, dragging heavy clogs, or exhibiting on their shoulders the marks of lashes.

It was stated that within the last year, twenty thousand had been imported into the province of Rio Janeiro through the port of St. Sebastian, a part of whom filled the markets, and others had not yet disembarked. A ship-load of them was one of the first objects which met our sight on reaching the harbour. They were arranged upon deck, tier above tier, and their bare heads and uniform countenances, (uniform from equal expression of despondence,) exhibited a frightful picture of aggregate misery. It may be thought, perhaps, that since the slave-trade is diminishing, and the state of slavery ameliorating, these remarks are unnecessary; but, in my opinion, the subject is not an exhausted one. Those countries that have consented through the interference of England to its abolition, have done so most reluctantly, and in no instance from principle. They all carry it on in a smuggling manner; and unless the good sense and humanity of the enlightened part of mankind be constantly on the watch against the sordid views of those persons whose immediate interest and opinions favour this bloody traffic, it will rise to all its former capabilities of inducing human misery, although its practices may not be so flagrantly displayed to the world. I much fear, from what I have heard, that in some of our own colonies, human bondage yet exists in its worst form, and still operates in producing its peculiar effect that of hardening the heart of man against the sufferings of his fellow-creatures.

It ought always to be kept in mind that the slave-trade, and not slavery, has been attempted to be abolished; that both exist in several parts of the world in the full possession of their horrid attributes; and, to use the words of an eloquent writer, "that from slavery in its mildest form, oppression, injustice, and cruelty are inseparable. These crimes have, from the beginning of it, formed its basis, and without them it can no more subsist than a house without a foundation."

I visited the Sugar-Loaf Mountain by water on the following day, and forgot, in the delightful scenery of its vicinage, my previous unpleasant reflections. As I approached a small fort near its base, I was challenged by a sentry, who ordered me to land, and to satisfy his officer respecting my object in visiting the coast. I obeyed, and was led into a fortress, strong in itself, but overlooked by the adjacent hills. Its commandant questioned me at first rather roughly as to my intention in coming there; but as soon as he ascertained the nature of my pursuits, and that I belonged to the British embassy, he became very civil, and described to me the nearest way to the foot of the mountain.

The Sugar-Loaf Mountain is a huge entire rock of granite, seven hundred feet in height, and owes its name to its conical form. It stands by itself, and the side facing the harbour is nearly perpendicular throughout. I had hoped to ascend to its summit, but the appearance of its precipitous sides effectually prevented my making the attempt. The scenery about its base was more pleasing than any other which I had an opportunity of seeing while at Rio Janeiro. Other parts of the country afforded views more imposing, from the immensity of their features; but they rather disappointed than satisfied the mind, from its incapacity to grasp their extent. On the contrary, in the neighbourhood of this mountain, they are on a scale within the compass of the mind's observation, and yet possess those characters of wildness, richness, and grandeur, which mark the landscape of this country. Standing on the beach, with my back to the sea, I had immediately before me the dark face of the mountain rising from a

wood of flowering trees. On my right hand, the same wood climbed, in a curve, the sides of precipitous ground, and was intersected by winding paths leading to a rugged rock. On the verge of this hung a picturesque cottage, and at its foot, groves of orange trees afforded a retreat from an unclouded sun, whose beams, darting through the intervals of their foliage, exhibited beautiful contrasts of light and shade. On my left, the land sloped in gentle undulations towards the sea, into which it ran in a narrow and rocky promontory: on this was built the fort near which I had landed. The effect of the scene was much heightened by the cooling sea-breezes; which, blowing over fields of flowers, came charged with delicious fragrance.

Having satiated myself with the contemplation of the objects around me, and collected many interesting birds, insects, and plants, I returned to my boat, and coasted along the rocky shore, which runs in steep declivities to the water's edge. I gathered on my way several specimens of Fuci and Confervæ, which included a greater number of species, than from the reported barrenness of these shores I had been led to expect. I doubt not, that a botanist, with a sufficient command of time, might collect from them treasures that would more than repay him for the trouble of his research. It is true, that as the shores are rocky and steep, they are seldom thrown upon land, and must therefore be gathered from their places of growth, which cannot be accomplished without frequently wading; but this, in a hot climate, is both wholesome and pleasant.

My next excursion led me to the Botanic Garden, distant about six miles from the town of St. Sebastian. The day was excessively hot; and my walk was through a deep sandy lane; but small houses of refreshment were numerous on the side of the road, which afforded the means of allaying thirst, at the most moderate expense: for three half-pence, as much lemonade, or weak brandy and water, was handed to me, as I could prudently drink. Such beverage would have been more grateful, had it partaken less of a local character; but as a traveller, I did not scruple to swallow, at every draught, a considerable number of ants, and a proportionate quan-

tity of dirt. On reaching the Botanic Garden, I received from the kindness of Senhor Gomez, its curator, refreshment of a more substantial and attractive kind.

The Botanic Garden is of considerable extent; and if its support by the Portuguese government was proportionate to the zeal of its superintendant, and the means of its improvement, it would become the first establishment of the kind in the world. The climate would favour the growth of all the plants of the east; and there can be no doubt, that such of them as afford commercial produce, might be cultivated with success and profit. But it has no other care bestowed on its management than what it receives through the judgment and exertion of Senhor Gomez, whose particular appointment is that of superintendant of some powder-mills situated in its neighbourhood.

This gentleman has, notwithstanding the defects of its establishment, contrived through the aid of a few Chinese gardeners, to cultivate the Tea-plant with great success. It was in seed at the time of my visit, and its leaves had been repeatedly and effectively manufactured. The process pursued is very simple. The leaves are gathered in the month of January, after heavy falls of rain, before they are wholly expanded, care being taken that no foot-stalks are mingled with them; they are then put into an iron vessel, and exposed to heat till they begin to shrink; when they are taken out, and rolled between the hands till they become spirally folded. They are then returned into the vessel, and again exposed to heat till it becomes intolerable to the hand, which continually agitates them, to prevent their burning; and thus the process is finished.

Many other Chinese plants, besides the Tea, were growing in the garden in full vigour. Amongst these, the Tallow-tree (Stillingia Sebifera), the Wax-tree (Ligustrum Lucidum), and Camellia Sesanqua, were the most conspicuous. The last-mentioned plant, Senhor Gomez was disposed to call the Thea Oleifera, from the belief, that it is not a Camellia, but a Thea, and that it is the Oil-plant of the Chinese. In the former opinion, he is probably correct; in the latter, he accords with the statement of others; but in another part

of this work, I shall have occasion to show, that the *Camellia sasanqua* is not the oil plant of the Chinese. The *Cactus opuntia*, which was formerly cultivated in this garden for the purpose of rearing the Cochineal insect, is now altogether neglected.

The Ipecacuanha plant of the Brazils grows in great quantity in the woods in the neighbourhood of the Botanic Garden, whence it is collected by the country people for the market. I lamented much, that the shortness of my stay at Rio di Janeiro prevented my obtaining this plant, of which so many confused accounts have been given. The difficulty of determining the plants producing the Ipecacuanha of commerce, appears to have been occasioned by the supposition, that it is entirely derived from one species; whereas there can be no doubt that it is afforded by two at least of different genera. A short history of the descriptions given of these by various writers, will perhaps be decisive in showing from what plants it is all obtained.

Piso and Margraave were the first who described the Ipecacuanha plant of the Brazils, but neither their figures nor descriptions were sufficiently precise to determine its genus. In 1781, Linnæus published a description which he had received from Mutis, governor of Santa Fe, of the Ipecacuanha plant of New Spain, under the genus *Psychotria*.* In 1801, a complete monograph of the Ipecacuanha plant of the Brazils was published by Brotero†, at Lisbon, from specimens furnished to him by Bernardino Antonio Gomez, who accompanied them by a dissertation on the characters, properties and culture of the plant. It was named by these authors *Callicocca ipecacuanha*. The plant of Gomez and Brotero has since been confounded with that of Mutis: in other words, the *Psychotria emetica* of Linnæus, and the *Callicocca Ipecacuanha* of Brotero, have been referred to the same plant‡ by Persoon, who has described

* Linn. Supplem. Plant. p. 144. † Memoria sobre A. Ipecacuanha Fusca, p. 57.
‡ Persoon, Synopsis, p. 203.

it under the genus *Cephaelis*. That they are essentially distinct, however, will readily appear from the comparison of their descriptions given in the Appendix.* Humboldt† and Bonpland have also very lately described and figured the *Psychotria emetica* as the Ipecacuanha of New Spain.

The *Callicocca ipecacuanha* grows, according to Brotero, in shady and moist places in Pernambuco, Bahia, Rio di Janeiro, and other provinces of the Brazils. The *Psychotria emetica* according to Humboldt "is cultivated in the warm and humid valleys of the mountains of San Lucar, near Simiti and Giron; and also in the district called La Vara de Guammoco, to the west of the river Magdalen." It is therefore evident, that two plants of different genera, one a native of North, the other of South America, produce the Ipecacuanha of commerce. The first reaches Europe from Carthagena in America, by the way of Cadiz; and the latter probably from the ports of St. Sebastian and St. Salvador, through Lisbon.

The plant which grows in the neighbourhood of the Botanic Garden was, indeed, supposed by Senhor Gomez, to be the *Psychotria emetica* of Linnæus; but the description with which he favoured me proves, I think, that it is the *Callicocca* of Brotero.‡

Two other plants also grew in the immediate vicinity of the Botanic Garden, which possess emetic and purgative properties, but in a less degree than the Psychotria or Callicocca. These are also collected for medicinal purposes, and are sometimes confounded with, and sold for the true Ipecacuanha. They are the *Richardia scabra* of Linnæus; called in Rio the White Ipecacuanha, probably the

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* See Appendix, A. † Plantes Equinoxiales.

‡ "Calix — Involucrum *tetraphyllum*.
Corolla — Infundibuliform: 5 fid.
Stamina — 5 intra tubum. Antheris simplicibus.
Pistillum — Germen ovatum. Stilus brevis. Stigm: bifid:
Pericarp. Bacca flaccida 2 sperm. Semina, arillata, sulcata, contorta, hinc convexa, inde plana."

Ipecacounha Blanca of Piso, and the Viola Ipecacuanha of Linnæus, known under the name of the false Ipecacuanha.

During the time I remained at the Botanic Garden, I received every possible attention from S. Gomez, and lamented much that the advance of the day obliged me to quit it when I had seen only a small portion of its treasures.

As I returned to St Sebastian, my path was illuminated by myriads of fire flies, whirling in the air, or lighting on trees. At a distance these insects resembled stars of great brilliancy, but as I approached them, their rapid and varied motion, and their vivid scintillations amidst dense foliage, disclosing patches of its most attractive hues, exhibited a transporting scene of novelty and beauty. It was perhaps equalled by the waves of silvery light, over which the boat glided that carried me from the shore to the Alceste.

One more excursion completed my opportunities of examining the scenery and productions of Rio. In this I visited many of the islands, scattered in great numbers over its harbour. These are much diversified in their forms, but are all of a similar geological structure. Their basis is granite, with large flesh-coloured crystals of Felspar. Their surface is a thin but rich soil of a red colour, and formed by the decomposition of the rock beneath. They are clothed with a luxuriant foliage, mingled with blossoms, whose colour and fragrance is only surpassed by the flavour and refreshing qualities of their fruits. Oranges, bananas, Cashew apples, and water melons, are their common produce.

These islands vary very much in size, being from 200 yards to one mile in diameter, and are frequently occupied by a single habitation. The oranges which grow on them were larger, more juicy, and of a better flavour than any I had tasted from the main land. The sailors were permitted to gather them in any quantity, with no other request on the part of their owners, than that care should be taken not to break the branches of the trees.

These well clothed islands are in some respects less interesting than the bare rocks in their neighbourhood, which rise in isolated

masses from the surface of the water. They are generally of a conical form, rising from 10 to 50 feet in height, and are seldom more than 60 or 100 feet in circumference. They seem to be the apices of cones, whose bases are under water. I sounded round one of the smallest, and found within a yard of its side 15 feet water, which rapidly deepened as I withdrew from it. The larger of these rocky islets do not consist of single masses, but are broken into several of singular shapes. In more than one instance, I saw a large cone of granite, 30 feet high, split from its very apex to its base, the parts of which had seceded against their gravity; proving, I imagine, that their separation could not have been the consequence of disintegration. Was it produced by a cause coëval with their appearance above the surface of the water?

Could I have dwelt on the appearances presented by the exposed surfaces of these rocks, I should have found perhaps many interesting geological facts, traced upon them in very legible characters. But the time I was enabled to spend in their examination allowed me to derive little else from their contemplation than the pain of awakened, but unsatisfied curiosity.

My pursuits having separated me from the suite of His Excellency, I lost the opportunity of witnessing the funeral solemnities of the Queen of Portugal. But from the information I obtained from those who saw them, I missed but little which my imagination had not supplied. I heard the tolling of bells, and the firing of cannon; and when to these my fancy added their other elements in the church, illumination, magnificent bier, chanting, and solemn response; in the streets, the glare of torches, priests, and nobles in procession, crowds of by-standers, and soldiers keeping the ground, I formed a picture which, if not agreeable to reality, was at least satisfactory to myself.

On taking leave of Rio de Janeiro, I feel desirous of leaving on the minds of my readers some general notion of the characteristic features of the city of St. Sebastian, and of the country in its neighbourhood; but I fear any description in my power to give would be

inadequate to this object. The strongest efforts of the imagination cannot picture any thing so heavenly as the country, or so disgusting as the town. The first contains many of the noblest works of nature in their greatest freshness and beauty, on a magnificent scale; the latter exhibits all the disgusting objects which pride, slavery, laziness, and filth can possibly engender. When I state that the face of high mountains is often covered with a sheet of blossom, a faint apprehension may perhaps be formed of the beauties of the country; but when I aver that on entering some parts of the town, I almost lamented that I had an organ of smell, I give no idea of the stench which exhales from the accumulated ordure of its streets.

CHAPTER II.

The Alceste left the harbour of Rio de Janeiro on the morning of the 31st of March, and after a very rapid passage, arrived off the Cape of Good Hope, and anchored in Table Bay, on the afternoon of the 18th of April.

We remained at the Cape till the 5th of May, when the Alceste sailed for the Straights of Sunda. The Lyra and General Hewitt had been dispatched nine days before, but our superior sailing enabled us to gain rapidly upon them, and we anchored in Anyer Roads on the 9th of June, two days after them.

Whilst at anchor I had an opportunity of examining a large shark, which was taken the day after our arrival. This animal, which measured twelve feet in length, was torn in pieces by the sailors the instant it was fairly on deck. They drew from its stomach a whole buffaloe's hide, two buffaloes' tails, one whole fowl, and the bones of another, the remains of several snakes, and a mass of matter of which it was impossible to ascertain the nature.

With some difficulty I made sufficient interest with its furious mutilators, to obtain its eye, the structure of which I was anxious to learn. It is supported on a firm cartilaginous stem, which arises from the bottom of the socket*, and passing by the side of the optic nerve, is articulated to the ball by a joint which permits motion in every direction. This joint is the centre of motion to six strong muscles that arise from the interior of the orbit, and are so inserted in the ball of the eye, that their whole action

* This structure has been pointed out by a celebrated naturalist, who considers the cartilaginous stem as a lever to the muscles. The same naturalist also observes, that the stem is articulated with the lower part of the orbit. Leçons d'Anatomie Comparée, tom. ii. p. 425.

amounts to the circumference of a circle, whose diameter is that of the portion of the ball comprehended within their points of insertion. This organisation seems necessary in the shark, which takes its prey by turning on its back, to enable it to keep its object in view when preparing to seize it. The eye balanced on a pivot is obviously capable of a greater extent of motion, in any direction, than when imbedded in the gelatinous matter, which lines the eye-sockets of most other fish.

With the shark I obtained a specimen of the sucking fish, (Echeneis Remora,) which I mention chiefly to remark, that it adheres as strongly to any surface when dead as alive. It is very difficult to remove it from any body to which it is applied, by pulling it perpendicularly, or backwards, but it readily yields when drawn off in the direction of its head. On examining its organ of adhesion with a lens, the cause of this readily appears. The plates composing it, which look single and membranous to the naked eye, under a microscope are seen to be divided each into several smaller plates, and armed with a row of fine teeth directed backwards. I was not surprised that its English name had produced a steady belief in some of my ship-mates, that it derived nourishment from the shark to which it adhered.

This fish has no air-bladder, and must therefore (as its fins and tail are small) depend chiefly on the animals to which it is attached for progressive motion. For the same reason it cannot go in search of food, but must depend on something that passes near it for subsistence. The stomach of the specimen which I examined contained some filmy matter which looked like the remains of zoophytes.

These notices may appear of little importance. I insert them from the conviction, that if every observation was recorded which has been made on the structure and habits of rare animals by those who have seen them alive, and in their native climates, much valuable information would now exist which is lost to the world. I know from experience, that many individuals of a ship are often well qua-

lified to ascertain important facts on both these points. I have repeatedly seen an ardent curiosity excited by my pursuits in the minds of those whose general habits of life would appear least likely to render them observers of nature; and I have been indebted to their industry, intelligence, and kindness, for the possession of a number of specimens and remarks, which, if they had not been unfortunately lost in the shipwreck of the Alceste, would better prove than words the correctness of my statement.

The medical officers of ships of war, and of Indiamen, are especially fitted for the pursuit of natural history, and still more so for that of comparative anatomy, and they do frequently make these departments of knowledge the objects of their study. But their modesty, looking to the extent of knowledge embraced by the masters of science, underrates the value of their acquirements. Many also are deterred from aiming at discovery, from the belief that they cannot tread a path which has not been before explored, or that the quantity of information necessary to give effect to their endeavours, requires exclusive occupation to obtain. But, surely, no part of knowledge is yet exhausted, and much that has been done requires to be modified; and it is one of the peculiar advantages of the present age, that the lover of natural history, instead of toiling through myriads of books to ascertain the amount of existing information on any of the subjects of his research, may find it comprised in a few volumes. But let me quit a subject which may be considered as irrelevant to the nature of this work; and which, if pursued, might lead into a wide field of statement and discussion.

Means of conveyance having been provided to take Lord Amherst and the gentlemen of his suite overland to Batavia, they set off on the morning of the 11th June for Sirang, which is about half-way between Anyer Point and Batavia. His Excellency, with his usual attention to the furtherance of my pursuits, permitted me to select my own mode of travelling. I therefore took possession of a dooly, and accompanied by Mr. Havell, who also preferred this mode of travel-

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ling, commenced my journey in the rear of the carriages which conveyed the other gentlemen of the embassy. *

It was dark before I arrived at the house of Col. Yules, the resident of the district of Sirang, from whose hospitality I obtained the pleasure of remaining in a part of Java interesting in the highest degree from its scenery and productions, during the stay of the Embassador at Batavia.

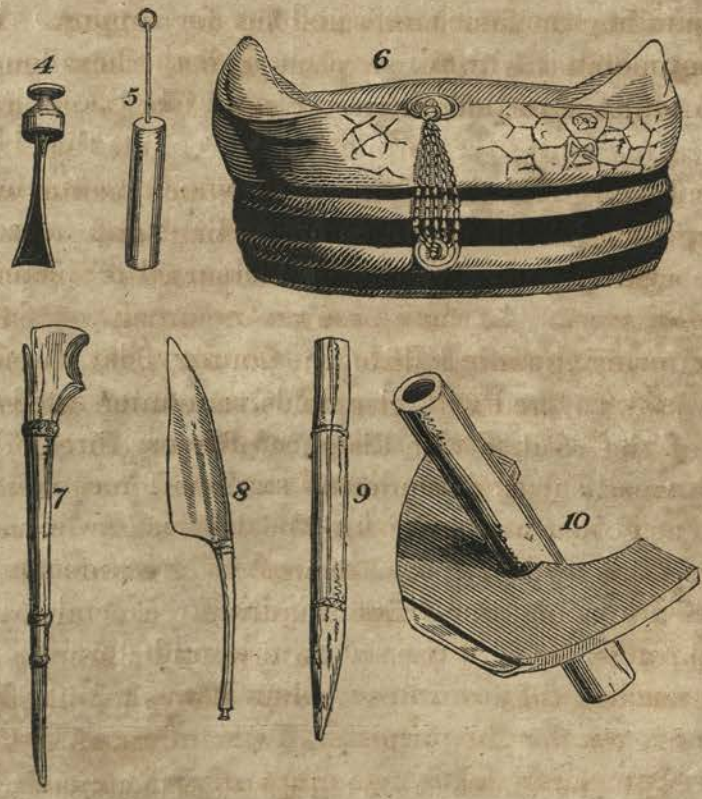
At day-light the following morning, Lord Amherst and many of the gentlemen quitted Sirang for Batavia, leaving behind Mr. Havell and myself.

As my stay was to be limited to a few days, I consulted with several gentlemen at Col. Yules respecting objects of interest in the neighbourhood of Sirang, and directed my attention to those which were more immediately within my reach. Of these, Gunong Karang, a volcanic mountain distant about 18 miles S. E. of Sirang, particularly excited my curiosity, through the accounts that I received of its magnificent crater. I therefore, at three o'clock in the afternoon of the 13th June, left Sirang in company with Capt. Soady, intending to sleep at the native village of Plassur Pittee, situated on its declivity.

Our way, during the first half of the journey, lay through a plain highly cultivated, covered with rice fields, and intersected by rivulets. By the side of the road, at the distance of every three or four miles, we met with small sheds, intended as stations for coolies or porters, who relieve each other in transporting packages, or who act as bearers of palanquins. They also serve as places of refreshment, their neighbourhood always abounding in cocoa-nut trees and bananas; the fruit of which, together with the areca-nut, and betel-leaf, are exposed

* A dooly is a kind of palanquin formed of bamboo, and resembling in shape a small house. It is well defended from the weather, and is carried by four or eight men, according to the size, who support it by transverse pieces of bamboo crossing the ends of poles which pass along its sides. Double sets of bearers generally attend it, to render the burden as light as possible, and they are relieved every four miles, by fresh relays.

for sale on a small table in the centre of the shed. The areca-nut, betel-leaf, and a small quantity of slaked lime, form the favourite masticatory of the Javanese. The better class carry them constantly about their persons in boxes sometimes of rather elegant forms, one of which is figured in the annexed engraving. Some of them add to this appendage two small instruments*, with which they bruise the ingredients for mastication before they take them into their mouths. One of these is a small hollow cylinder, having a piston which works within it. Having drawn back the piston, they fill the cylinder with the areca-nut, betel-leaf, and lime, and bruise them with an instrument shaped like a chisel, by working it about in the



* These instruments are shown by figures No. 4 and 5.

hollow of the cylinder. Having done this, they place its open end between the lips, and forcing down the piston, drive the masticatory into their mouths. But these instruments are, I suspect, confined to old men, who use them as a substitute for teeth. We halted at one of the sheds, about half-way on our journey, and partook of the never-failing and ever-grateful beverage in this climate, cocoa-nut juice. This fluid is very sensibly cool when taken from a nut fresh gathered, and as far as my experience goes, is free from any deleterious qualities. The end of the nut in a green state, is readily cut off with a strong knife, and the juice is drunk from the opening thus made. The natives climb the tall tapering palms which produce this fruit, with wonderful dexterity; oftentimes ascending them without artificial aid, depending on their hands and feet for support. Sometimes, however, they notch the trees, or place against them long and thick bamboos, to which they affix a row of pegs that serve as the steps of a ladder.

Soon after leaving this place, the road, which before was tolerably level, became rugged, continually ascending, and sometimes very steep. The scenery on each side was composed of hillocks speckled with clumps of trees. At their base ran mountain torrents, in which natives were watering their buffaloes. On our right, Gunong Karang rose majestically in the back ground; and smoke ascending above trees, marked the site of the village of Plassur Pittee. As we advanced, the inequality of the ground increased, and had obliged the natives to cut it into terraces, for the cultivation of rice. These they had irrigated by filling up the bed of a stream at an elevated point, where its waters were first required. Having overflown the first, or uppermost field, it passed to a second; from a second to a third, till it reached the lowermost, when it was led into its old channel by a trench cut for the purpose. I was informed that the natives obtain from their paddy fields two crops of rice annually, in the high lands. Besides rice, they obtain two crops of esculent vegetables sweet potatoes, and after these, cucumbers with a species of bean. They allow no repose to the soil, which is a rich vegetable mould

constantly watered by rains and heavy dews, and fertilised by mountain torrents charged with the decay of vegetation, and the mouldering of rocks. The method of reaping in Java is the same as in many other parts of the East: the stems of the corn are divided singly. The instrument used by the Javanese for this purpose is shown by Fig. 10. in the wood engraving.

Continuing our route, we entered, about eight miles short of Plassur Pittee, an extensive forest formed of distinct woods, which were separated from each other by plains of the richest green: over these were strewn the huts of the natives surrounded by palms contrasting with trees of freer foliage. The natives, in their picturesque dresses, were every where issuing with their buffaloes from the woods, or loitering with careless indifference in their shade. The beauty of the picture could not be surpassed; and its various parts so harmonised together, that in their adjustment, nature seemed to have been directed by the hand of design.

Having passed two miles of this delightful region, we turned suddenly to the right, and soon lost all marks of a beaten track. My companion, notwithstanding he had previously visited the mountain, missed the path, and became entirely bewildered. Night would probably have overtaken us in a situation where beasts of prey are numerous*, but for the natural benevolence of a Javanese, who seeing us from a distance, guessed our embarrassment, and hastened to our relief. He pointed out some branches of trees which were fixed in the ground, and made us understand, that the inhabitants of Plassur Pittee, when informed of our intended visit, had planted them for our

* Tigers abound on the island of Java. Not far from the spot where I then was, my companion had been obliged, some time before, to encamp for the night; when a boy who slept near him was carried off by one of these animals, notwithstanding the precaution of fires. I was informed by Professor Reinwardt, during my last stay in Java, that no less than thirty persons had been destroyed by them, in the space of two months, near the village of Buitenzorg. His Excellency Baron Van de Capellan, the present governor of Java, fell in with three tigers whilst on a shooting excursion, about a mile from his residence at this place. I saw the skin of one which was shot by his party.

guidance, and that we should find them continued to the village, which was distant about three miles. Thus directed, we pursued our route till within about a mile of our destination, when the precipitous nature of the ground obliged us to dismount. Looking back from this spot, at a fourth of the ascent up the mountain, we commanded a view of a great extent of country, expanding to the computed distance of thirty miles. The woods which we had passed seemed to be dwindled into spots of green, and the huts of the natives were scarcely visible.

At six in the evening we reached Plassur Pittee. This village stands on a platform that is terraced from the declivity of Gunong Karang, which towers at its back. The summit of this mountain is covered with thick and impenetrable woods, which, extending beyond the village, flank it on both sides.

We were surrounded by the villagers as soon as we arrived, who busied themselves in preparing for our accommodation and refreshment. To defend us from the cold and damp of the evening, and to keep off the musquitoes, they lighted fires about the hut intended for our reception. Looking at these men armed with daggers, and formed into groups about the fires, and reflecting that we were defenceless in the midst of a people who had been often represented as assassins, I felt something like alarm, and the first incident I met with for a moment increased it. Whilst examining a lamp suspended before the door of a hut, the natives who had been lying around me on the ground hastily started up, and seizing a bundle of lighted bamboos, ran towards me. My apprehension was needless. Observing me handle the lamp, they imagined I wished for a light, and their sudden movement was the consequence of their zeal to please me.

On entering the hut, I found my companion seated with the *Ingabi**, at a table covered with bananas and oranges. Having added to these some of our own stores, we soon found ourselves perfectly

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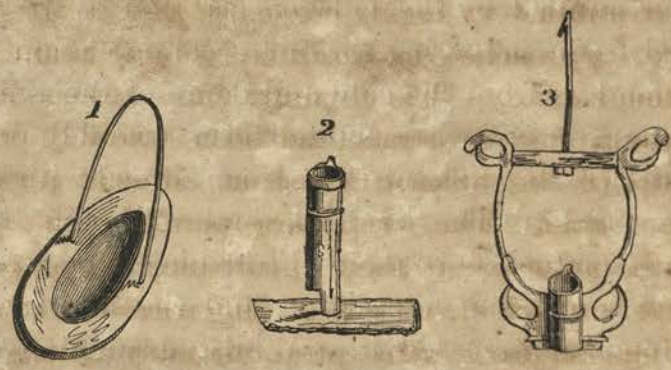
* Native district officer.

at our ease. The hut consisted of three apartments, separated from each other by bamboo mats; the centre, open at both ends, was our sitting-room; the others, divided from it by matting, formed our bed-rooms. A plank of wood, simply hewn from a tree, and supported on four legs of bamboo, formed our table, and our seats were of similar construction. Three lamps of different forms lighted our apartment; one standing on the table consisted of a small block of wood, in which was fixed a piece of bamboo supporting a segment of a cocoa-nut; the second was the half of an oblong fruit hollowed in its centre, and through its sides was passed a slip of bamboo, by which it was suspended; the third was more complex in its fabrication, and more elegant in its shape. Each was furnished with cocoa-nut oil.



Our beds were bamboo frames, covered with mats; on these, with our saddles for pillows, we passed the night. I suffered severely from cold, the thermometer having fallen in the evening, between the hours of six and twelve, from seventy-five to sixty-six degrees. Leslie's hygrometer marked the point of extreme moisture.

At day-break we recommenced our journey to the crater of the mountain, accompanied by natives in great numbers, part of them being appointed as guides by the Ingabi, the others attracted by curiosity. The ascent of the mountain from the village was extremely steep from its commencement; and although a road had been cut by the natives through a wood, over a narrow ridge,

between two deep ravines, its difficulties would have been insurmountable but for the methods used to overcome its greatest obstructions. Whenever it was very precipitous, with no projections of the roots of trees by which to cling, strong bamboos were placed perpendicularly in the ground on either side of the path, and branches of trees were hung transversely between them, forming flights of steps which, in some places, continued for fifty feet. Having ascended for about an hour, we reached an open space, from which I had been promised an extensive prospect, but to our great disappointment, thick masses of cloud rolled at our feet, and hid every thing from our sight beyond the distance of a few yards. Having refreshed ourselves, we again advanced, and in another hour attained a part of the mountain where a large surface of its rock was entirely exposed. It consisted of strata very highly curved in their centre, was compact in its texture, approached to basalt in general character, and contained radiated zeolite. This exposed mass was on the ridge over which we passed, and its strata had been probably bent by one of those eruptions of the volcano which at different periods had convulsed the mountain. The strata were parallel with the sides of the ravines, to which the line of their disturbance was perpendicular.

The ridge over which we were ascending narrowed as we proceeded, and the ravines on both sides proportionably enlarged, appearing to have been the paths of lava at some distant period. Although thickly clothed with verdure, it was easy, when the clouds occasionally cleared, to trace their general form. They are narrow at the commencement near the bottom of the mountain, but widen as they ascend into immense semicircular basins. Still advancing, and having completed a large portion of the ascent of the mountain, we gained the verge of the crater, which it was my principal object in this excursion to visit; and now with regret I ascertained, that without ropes it was impossible to descend to its bottom; and that there would not be sufficient time to despatch any of our attendants for them. I was therefore obliged to content myself with the view I could obtain of it from the point where I stood. Its shape is that of a

horse-shoe, and, like the ravines, its narrowest is its lowest part. The sides are nearly perpendicular to the apparent depth of three hundred feet. Their upper part, to within one hundred feet of their base, is clothed with a thick foliage, but below, quite bare. The bottom of the crater is formed, as I afterwards ascertained, of masses of crystallized sulphur, and of sulphur mixed with fine white volcanic ash. At its narrowest part, which bore south from the point where I stood, I could distinctly trace ridges, looking, at a distance, like furrows. Smoke was issuing from it in many places, which, rising upwards, surrounded us with a sulphureous atmosphere. Clouds frequently rolled from the bottom to the top of the crater, and were in perpetual oscillation, sometimes filling its whole area, and hiding every object; then receding and leaving every part visible. The ground shook beneath us, and appeared to be composed of little else than the roots of trees and the decay of vegetation. The interval separating the ravine on the right and the crater on the left, was not more than two feet in width; but the thickness of the wood, whilst it afforded firm handhold, prevented us from observing much danger in our situation. I had no barometer with me, and therefore could not accurately measure the elevation of the highest part of the verge of the crater. Fahrenheit's thermometer stood at 68° at 11 A.M., when in the plains, it was at 84°. and Leslie's hygrometer* was less than zero. Water boiled at 206°.

During our whole ascent we had been surrounded by interesting plants. The ferns and mosses were especially beautiful. Of the former the smaller tribes were in the greatest variety; and the tree ferns were occasionally so abundant that they formed perfect woods occupying a considerable space of ground, to the exclusion of other plants. Of mosses I collected a great number; some of them of a size unusual to their order. In a cave formed in the bare rock, before described, I found the Polytrichum undulatum, in all respects resembling the

* Of the use and defects in the structure of this instrument, I shall have occasion to speak in another part of this work.

British species. It was delightful to find, so far from home, a plant familiar to my eye, and connected in its associations with the dearest scenes of my life.

Amongst the flowering plants, the most remarkable was the *Nepenthes distillatoria**, which the natives of the mountains call the king of plants. They believe that the water contained in its basket-like appendages possesses medicinal properties, and that it strengthens the sight. This plant grows near the roots of trees, varying much in size and appearance: in the latter particularly, from bearing, in what I conceive to be a young state, its peculiar organs without a corresponding leaf. I have seen specimens of the plant with few leaves and many appendages. I generally found a great number of drowned insects in the water of these receptacles, but could ascertain nothing in its taste or smell that was likely to have attracted them. The same circumstance is met with in *Sarracenia adunea*.

In descending the mountain I was obliged to use great caution, as the path must always be very slippery, in consequence of the heavy dews which fall upon the mountain; the thickness of the woods prepreventing their evaporation. On our return it was especially so, as it was raining heavily during our descent. I stumbled frequently, and should have fallen more than once, but for the attention of the natives. They followed me closely, uttered a cry at every false step I made, and caught me by the arm whenever I was in danger. It is impossible to do justice to the active and emulous good-nature of these mountaineers, who were anxious to excel each other in rendering me service. During my stay on the mountain I received great assistance from them in all my pursuits, although they could not comprehend their object. They were at first much amused at my collecting plants familiar to their daily observation, yet vied with each other in gathering them for me. If I pointed to a flower

* When in China, I received specimens of this plant from some islands in the neighbourhood of Macao, which I could not discover to be different from those gathered on Gunong Karang. See Note (B) in Appendix.

at a great elevation, several started to obtain it, and he who succeeded evidently triumphed in his fortune. Neither was my presence necessary to excite them to this benevolent activity. Not being able, from the advance of the day, to reach the top of the mountain, I despatched several natives to collect specimens of rocks from it; and on their return, I was surprised to see them laden with pieces of rock, bundles of plants, and joints of bamboo full of water collected from hollows at the top of the mountain. This they seemed to consider as holy, advising me to wash myself with it as a security against danger. But I should exhaust the patience of my reader were I to mention but a small proportion of the numerous proofs I personally experienced of the innate principles of benevolence that enter into the moral character of the Javanese. Not only in the excursion of which I am now giving the narrative; but during the whole period of my first and second visit in Java, they repeatedly occurred to me. That their intellectual is equal to their moral excellence, may be inferred from the specimens of their poetry which have lately been given to the world.* Yet these are the people who have been pursued as beasts of prey, and of whom upwards of four hundred have been barbarously and uselessly slaughtered† since the island of Java has been given up by the English. Thank God, I did not hear that any of my countrymen had ever oppressed them, but often heard, and often saw, that the Javanese looked upon the English rather as benefactors than as masters, and it was notorious that the name of Raffles was almost idolized by them.

The natives whom I saw in the mountain had limbs of more elegant shape, and greater symmetry of form, than those of the plains; and also appeared more active in their habits.

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* See the extensive and valuable work on Java, by Sir Thomas Raffles.

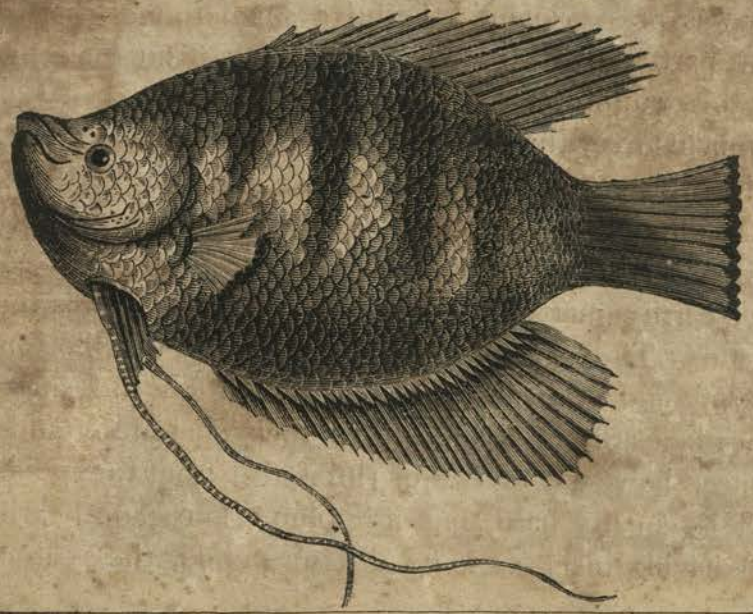
† See Quarterly Review for August, 1817. I may here remark, that I frequently heard of the massacre in Java, of which a statement is given in that publication, during my continuance on that island, and that its horrors have been rather extenuated than aggravated, by its narrator.

Having reached Plassur Pittee about 5 o'clock in the evening, we set off for Pandigalang, a village five miles to the east of the mountain; and at this place, which was formerly famed for the manufactory of bracelets, we passed the night.

On the following morning several natives brought different kinds of arms and ornaments for sale, in consequence of its having been given out by the Ingabi, the preceding evening, that I wished to purchase some. There was, however, an evident reluctance to dispose of them, and it was stated that those only parted from their weapons who were embarrassed by gaming. I learned from general testimony that the Javanese have a kind of superstitious attachment to their arms, especially when they have descended to them from their ancestors, or have been illustrated by use in war. Of those brought to me, the kriss was the most remarkable. It is a dagger worn by all classes of the natives of Java, and by the Malay tribes in its neighbourhood, having sometimes a crooked or curved blade, and a handle very beautifully carved. Its sheath is generally of wood or metal; frequently of gold. The gold thus used is of various degrees of purity, from an equal mixture of copper to a fineness which permits the most delicate assay; but it is generally very thin, being a mere covering to a case of wood. A variegated wood is also in great estimation for the manufacture of sheaths: it has a light ground, marked either with dark spots or veins. A knife of rather elegant form, and neatly ornamented with silver, was also brought for sale. The natives wear these arms in different parts of their dress, and they derive from them in the eyes of a stranger a formidable aspect: they place them generally in their girdles, either before or behind, and sometimes on one side. The kriss seems formed for a back stroke, and is easily concealed by turning it under the fore-arm. I made a drawing of these instruments; and specimens of those which I thought interesting from their form or workmanship, are shown in the annexed engraving.

Gold and silver ornaments are much worn by the Javanese women, and are very complicated in their pattern. I saw the commencement of the manufacture of one of these, a silver belt for the waist. The workman having beaten out the silver to the requisite dimensions, placed it in a bed of wax; he then, with a small hammer and chisel, began to trace the outline of the pattern by successive indentations; and in this simple but tedious manner the work was to be finished.

Before I left Pandigalang, my friends the mountaineers brought some splendid specimens of native sulphur, which they had collected from the bottom of the crater of Gunong Karang. With it they also brought me a specimen of the Goramy*, a fish found in many of the rivers of Java, and celebrated for its flavour. It is beautiful in its hues and singular in its form. The ground colour is orange, that of the back a dark bronze, which passes in undulating lines over its sides. Its form is a roundish oval, the head short, with a somewhat recurved snout; but the animal is particularly distinguished by the prolongation of its pectoral fins into thread-like processes, several inches in length. The native princes of Java keep these fish alive in large quantities in reservoirs near their dwellings. Its general characters are well marked in the annexed engraving.



* Probably the *Trichopus Goramy* of Shaw, who supposes it to have been introduced into the rivers of Java, from China. Zoology, Vol. IV. Part II.

We returned to Sirang on the evening of the 15th, and on the following morning made an excursion to a place called Epetan, about eighteen miles to the north of Sirang, to see some mineral springs. These springs are in the midst of a jungle on the right hand side of the road from Sirang to Batavia, and the country for many miles around is a perfect flat. On approaching them I smelt the sulphureous gas, which they throw out in immense quantities. They are situated on a piece of barren ground about fifty yards square, composed of a hard rock, which seemed to have been formed by deposition from the springs. In the midst of this space were several small pools of water in violent commotion. They so exactly exhibited the appearance of boiling, that I immersed my hand in them with considerable caution, and scarcely credited my feeling when I found them of the temperature of the surrounding atmosphere. The central pool was the largest, having an area of eight or ten feet. The water bubbled up from several parts of its surface. For the sake of ascertaining the cause of these phænomena, I walked in and discovered its greatest depth to be about three feet. Its bottom was formed of rock, broken into masses of different shapes. On searching immediately under the place where the agitation of the water was most violent I found a small funnel-shaped aperture, the lower part of which was not more than an inch in diameter. Through this, sulphuretted hydrogen rushed up in such quantity and with so much force, that I could with great difficulty keep my hand close to its orifice.

On examining the sensible properties of the water on the spot, I found it to be of a dirty white colour, containing a considerable portion of earthy matter in suspension. The smell was that of Harrogate-water. The soil on the margin, and at the bottom of these pools, is soft and of a yellowish grey colour on the surface; but a few inches beneath, it becomes of a rocky hardness, and red. At the distance, however, of two or three feet from the pools, the surface itself is equally hard, but of a blue colour, and bearing evident marks of having been at some distant period, the seat of agitated

water. A loud bubbling noise is distinctly heard, on placing the ear close to any part of the barren spot in which they are situated. The natives believe that the water possesses medicinal properties, and that it is especially efficacious in cutaneous disease. *

On my return from the Springs, I made an excursion to Bantam, which is seven miles to the north of Sirang, for the sake of obtaining some specimens of the large bat of Java, which resort to groves in its neighbourhood.

Bantam differs but little in appearance from other native towns of Java, consisting for the most part of long streets formed by the huts of the natives, surrounded on all sides by plantations of fruit-trees, of which the cocoa-nut and the banana are the most conspicuous. Passing through a lane formed of these dwellings, my attention was attracted by the firing of a musket and the sound of music; and on looking into an enclosure surrounding a cottage I saw a number of natives assembled, some of whom were gaudily dressed. As soon as I was perceived by them, they invited me in, not, as I had imagined, to witness a marriage-festival, but the rite of circumcision. I was ushered into a small square room, full of people. A wide bench passed from one side of it to the other, on which were spread three mats covered with plantain-leaves; and over these hung as many curtains formed into small tents. This preparation had been made for the reception of three little boys about five years of age, who underwent in my presence the operation of circumcision; which was performed by a native surgeon with great dexterity and dispatch. † On the completion of each operation a musket was discharged and

* At the period of my visit, I was annoyed by some troublesome ulcers from the bites of musquitoes, which had covered my hands for several days; but they healed immediately, after having bathed them with the water of these pools.

† Unus ex iis qui adsunt super ejus genua puerum ponit, oculis hujusce pueri amictu quovis coopertis. Chirurgus, arundinem parvam, inter glandem, et præputium intromissam, hinc atque hinc versus latera versat, quo hæ partes melius separentur, et instrumentum quod postea utendum est, facilius applicetur. Manu deinde depressa id efficit ut arundinis pars extrema exterius, punctum quasi tumidum, sentitur, quod statim cum

music played. The little patients evinced no signs of pain, and immediately after their respective operations were conveyed to their separate plantain-leaves, which were to be renewed as often as coolness and cleanliness required. The parents of the children considered the presence of a stranger on this occasion as a propitious omen.

Leaving this place, I paid a visit to the Sultan of Bantam, to whom, being ill, I wished to tender my medical assistance. On my way I passed the ruins of the palace of his predecessors, lying in shapeless confusion, and possessing no other interest than arose from the beautiful ferns * that every where covered them. The present residence of the Sultan is an old Dutch house on the banks of a canal which nearly encompasses it. In front is a court-yard, containing at the time of my visit several old-fashioned European carriages; cages with different birds and animals placed against its walls; and vases of water filled with fish standing without order in different parts of its area. I was received at the door of the house by the Regent of Bantam, and conducted by him into a long room hung round with the arms of the Sultan: spears, swords, and daggers, glittering with diamonds and gold, hung against bare and mouldering walls, and contrasted with a few mutilated chairs of European manufacture.

A groan directed me to the dying Sultan, who lay stretched on a small pallet at one end of the room, supported in the arms of an interesting looking woman, and attended by two of his male relatives. Although the last struggles of life agitated his frame, he had sufficient strength to grasp my hand, and by a motion of his head to decline my assistance: it would have been unavailing, as he died a few hours after I left him.

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cretâ notatur. Arundo extrahitur, cujus locum supplet unus e ramis forcipis e ligno (cui nomen Bamboo) constructæ. Ejus ramus usque ad notam supradictam pervenit; hoc instrumento præputium a glande deducitur quo aliâ ex forcipe includi possit. Scilicet hæc forceps præputii partem comprimit, ut in hoc situ, facile cultro abradatur. Sanguinis effusio a pulvere quodam albo supprimitur.

* Of these ferns I dare only mention two, the *Pteris piloseloides* and *Acrostichum aureum*.

On quitting this house of mourning, I hastened to a grove, where I expected to find many of the great bats of Java, which had been represented to me as Vampires, and which in look and ferocity might be supposed to appropriate the fables of those frightful beings. I had often seen, since my arrival in Java, flying in the day-time at a great elevation, an animal making a noise so resembling the cawing of a crow, that at first I mistook it for a species of this bird. I now saw many of its species suspended in large clusters with their heads downward from the branches of trees; and so firmly did they adhere, that although I fired at them, and must have destroyed two or three, they did not fall. By throwing large stones, I obliged them to quit their resting places and to take wing, many of them with young ones clinging to their breasts. They then hovered about, screeched violently, and, flapping their enormous wings, circled close over my head, reminding me of the harpies of antiquity. After some trials, I succeeded in shooting two, a male and female: the male being the larger. Nothing could be more hideous than their aspect. Their bodies, covered with long hair, resemble that of a fox in colour, smell, and form, but that of a full grown rat in size. They are suspended between wings, similar in texture to those of a common bat, but extending five feet from one extremity to the other. The tail, which is four inches long, is also like that of the fox, and is enclosed by the membrane uniting the hinder extremities. The female, which was only wounded in one of its wings, endeavoured to strike me with the other, screeching violently at the same time, and grinning horribly. When left to itself it exerted its fury on the wounded limb, which it smashed with its teeth.

The great bat of Java*, as far as I could ascertain, is not carnivorous, but is much dreaded for the destruction it occasions to fruit trees, whole orchards of which it denudes of their blossoms. The

* The great bat of Java bears the same name as that of New Holland, flying-fox. It also in some respects resembles it, but differs from it in having an undivided membrane between its hinder extremities.

stomach also connects it with herbivorous animals*; and that it does not feed on mice, as supposed by some authors, is rendered probable by its habit of flying at great heights. It is often seen in the day-time passing over the Straits of Sunda in large flocks. This fact is stated by Mr. Marsden †, in his History of Sumatra, and has been corroborated by the experience of Capt. Ross, of the East-India Company's ship Discovery, who assured me that he had witnessed it.

On my return from Bantam to Sirang, I passed a large house situated on a small island in the midst of a bog, which the legends of the natives had peopled with formidable serpents. The house was said to be the prison for the refractory or unfaithful wives of the Sultan of Bantam. The effluvia of the marsh would probably be more destructive than its monsters to the inmates of such a dwelling.

On reaching Sirang, I was gratified by finding that during my absence a skin of the large snake of Java, measuring nine feet in length without the head, had been brought in. It had been taken from a snake that had been killed in the act of swallowing a kid, but two days before. This serpent, often met with in Java twenty feet in length, inhabits woody and swampy grounds, but sometimes approaches the huts of the natives, and makes great havoc amongst their poultry when no larger animals fall in its way. In its attacks

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* The stomach consists of four divisions. The first is a sort of pouch, formed by the expansion of the œsophagus. The second is distinctly separated from the first, by a muscular contraction, but is equal to one half of the whole stomach: it contracts into a gut-like pouch for nearly a third of its length, before it terminates in the third division, with which it communicates by a small muscular orifice. The two last divisions are equal to about one fourth of the whole stomach; of this proportion the third division occupies full three fifths, the fourth division being very small, but thicker in its coats than any of the others. It communicates with the third division, and the duodenum by very contracted orifices. I know not whether the bat of Java be of the same species as the one dissected by Sir Everard Home, the stomach of which has been described by him in his work on Comparative Anatomy; but the structure of this organ in both appears to be the same.

† History of Sumatra, p. 118.

upon them, it resembles the *Boa constrictor* of authors; destroying by the force of its muscular folds deer, goats, wild hogs, and sheep; which it gorges whole.

It has been stated by an author * often quoted for his authenticity, that "he bought one of these snakes of a hunter, and on dissecting it found in its body an entire middle-aged stag covered with its skin; that he purchased another which had swallowed a wild goat in spite of its large horns; and that he drew from the stomach of a third, a porcupine armed with its quills:" he also mentions that "a pregnant woman was swallowed by one of these animals." †

Till recently such tales have been considered fabulous, and yet there can be no doubt but those who have lived much in torrid climates must frequently have witnessed corresponding facts. The description I shall presently give of the habits of a large Java snake, which I saw alive at Batavia, and afterwards examined both alive and dead on board the Cæsar, will be sufficiently illustrative of its power of destroying large quadrupeds. That it is equally capable of destroying and prone to attack a human being, I could gain no certain evidence in Java. It will appear, however, from the following statement, that man himself is not always secure against his formidable power.

Captain Ross (whom I have just mentioned), while in his ship off the island of Celebes, was visited by a canoe from the shore, containing two Malays, and the mangled body of a man, the bones of which were mostly broken: the arms especially being dreadfully crushed. The eyes appeared to be starting from the head, in consequence of its having been violently compressed. On enquiring the cause of these appearances, the Malays informed Captain Ross, that having landed to fish along shore, they had left the canoe in

* Andreus Cleyerus, quoted by Lacépède. Hist. Natur. des Serpens. Tom. ii. p. 360.

† "Dans l'isle d'Amboigne une femme grosse fut un jour avalée toute entière par un de ces serpens." Extrait d'une lettre d'André Cleyerus, ecrite de Batavia, à Menzélius, Ephémérides des Curieux de la Nature. Nuremburg, 1684. Decade 2. an. 2. 1683, p. 18.

charge of the poor fellow whose body he saw; that they had told him to be on his guard against the large snakes which are often seen on the skirts of the wood near the sea; that they had not left him long before they were alarmed by his cries, and on hastening to his assistance, found him enveloped in the folds of a large serpent; that he was dead before they could destroy the snake, which did not quit its hold on their approach. They then produced the head of the snake, which Captain Ross examined. It was very small when considered in relation to the extraordinary power of the animal, and capability of swallowing; for it would doubtless have gorged the body of the man, unless prevented by the appearance of his companions. It did not measure more than eight inches in its greatest diameter. The man had evidently been seized by one of the wrists, as it bore the impressions of the snake's teeth.

That the size of the head of a snake bears no proportion to the magnitude of an animal which it is capable of swallowing, will be evident from an account that I shall now give of a specimen, whose head measured in its greatest longitudinal diameter five inches, and in its greatest transverse diameter four inches and a half. The internal width between the two portions of the lower jaw, within which its prey must have passed to its stomach, was rather more than an inch and a half. This animal, which the drawing correctly represents, measured eighteen feet in length, and eighteen inches in its largest circumference. Its predominant colours were greenish brown, with a purplish tinge, and yellow and black. Greenish brown, speckled with a brownish yellow, was the colour of its back, and bright yellow, speckled with black, the colour of its belly. It was a male.

This animal, although permitted, when I saw him at Batavia, to leave his cage, and go into an open space, was seldom disposed to avail himself of this liberty, and it was often necessary to drag him out, and to irritate him repeatedly, before he could be induced to move. He would then stretch himself to his greatest extent, and without throwing his body into any curve, glide so closely, slowly,

and silently along the ground, and so exactly harmonised in colour with the soil * over which he was passing, that unless watched, he might easily have been overlooked. Whilst at full length, he might be approached with safety, as he had not then the power of darting; but when he reared himself on his folds, and put his head into a vibratory motion, he had the greatest command of his powers, and exhibited the most threatening aspect. This attitude he usually assumed after he had been some time from his cage, and all who were near him involuntarily drew back. A live duck being brought to him, he felt it for a moment with his forked tongue, and then seizing it by the breast, endeavoured to wind his folds about its body, which being too small to suffer from their compression, he threw the weight of one of his folds upon its neck, and strangled it. When it was dead, he gradually withdrew himself, and taking it head foremost into his mouth, sucked it down his throat. But a duck was only a mouthful to him; a goat being his usual meal. On board the Cæsar he swallowed two, which were given to him in his cage, at the interval of a month from each other. As soon as the goat was within his reach, he raised his head above his coils, and having contemplated his prey a few seconds, felt it with his tongue. The goat did not appear to be much alarmed, as he examined the snake closely, smelling him over with great deliberation. The snake having withdrawn his head a short distance, made a sudden dart at the throat of the goat, which received him on its horns, and obliged him for an instant to retreat. He then made a second dart, and seizing the goat by the leg, pulled it violently down, and insinuated his folds with momentary rapidity about its body, squeezing it at the same time with all the force he could bring to bear. But even in this instance, the animal was too small to suffer their whole compressing effect, and he was obliged to

* An author has stated, that eighteen Spaniards, when in the woods of Coro, in the province of Venezuela, seated themselves on a snake, which they mistook for an old trunk of a tree, and which to their great astonishment began to move!!! Hist. Natur de l'Orenoque, par le P. Gumilla, Vol. iii. p. 77.

destroy the goat much in the same manner as he had the duck, by throwing the weight of his body on its neck. The goat was eight minutes dying, but was so entirely overwhelmed by the power of the snake, that it could not even struggle.

The snake did not attempt to change his posture for some minutes after the goat was dead. At length he gradually slackened his folds, and then disengaged them one by one, with great caution and slowness, as if to ascertain whether the goat retained any power of motion; and having entirely disentangled himself, prepared to swallow it by placing himself opposite to its head, and feeling it with his mouth. While doing this, saliva flowed abundantly over his jaws, but he made no attempt to besmear his prey. In a few minutes he took its nose into his mouth, and endeavoured to draw the head after it: but this appeared to be no easy task. The dilatation of his throat seemed to begin with difficulty, as he was at least one-third of the time consumed in gorging the goat, in getting down the head and horns. These diverged at a considerable angle, and were four inches in length. Having conquered them, he grappled with the shoulders, which he was some time in mastering; but readily overcame the remainder of the body. In drawing the goat into his swallow, he appeared to work himself unto it, opening his mouth as wide as possible, and forcing it onwards. Whatever progress he thus made, was preserved by strong recurved teeth which permitted the animal to pass down his throat, but prevented its regurgitation without his will. The act of swallowing was also much aided, I suspect, by the pressure of the air on the goat's body, as a deep inspiration accompanied every successive attempt to draw it down his throat. * He was two hours and five minutes in gorging the whole animal.

The appearance of the snake, when in the act of swallowing the shoulders of the goat, was very hideous. He seemed to be suffering strangulation. His cheeks, immensely dilated, appeared to

* That inspiration assists the deglutition of snakes, is also mentioned by Lacépède, in his Histoire Naturelle des Serpens. Tom. ii. p. 362.

be bursting, and his windpipe projected three inches beyond his jaws. The horns of the goat, which had advanced only a few inches down his swallow, protruded so much, that I expected them every instant to penetrate through the intervening membrane of the scales, which they separated from each other. After the goat was down, he scarcely moved from the posture he was in during his last act of deglutition, but fell into a semi-torpid state, from which no irritation could rouse him for several days. At this time he measured three feet in his greatest circumference, having doubled his ordinary diameter. The goat's body underwent no visible diminution of bulk or consistence by the action of the snake's folds, but seemed to pass down his throat in an entire state.

This snake having died on his way to England, forty days after swallowing a second goat, I opened him with the view of observing his internal structure, and of ascertaining, if possible, the cause of his death. On the deck of a ship, and surrounded by a number of eager, but restless observers, I could not make the examination with all the precision I wished, but succeded in obtaining the dimensions of some of the principal viscera, and found that their magnitude generally corresponded with the external proportions of the body. The lungs consisted of two lobes, closely attached to his ribs; the left being three feet three inches, and the right one foot ten inches in length. The heart was about the size of a goose's egg. The æsophagus was six feet six inches long, and the stomach one foot nine inches: the breadth of the latter when opened, and gently expanded, was one foot. The intestines measured five feet six inches in length. The liver consisted of two lobes, each lobe being three feet long. The gall-bladder was the size of the heart, and full of a green viscid bile. Each of the kidnies was a foot in length. The spleen consisted of a large number of loosely-connected dark-coloured conglobate glands.

The coats of the stomach were very thick and muscular, and thrown into a variety of folds. Its œsophageal and intestinal orifices were very contracted, and the latter would scarcely allow the introduc-

tion of my little finger. The coats of the intestines, in a contracted state, near their communication with the stomach, were an inch in thickness.

On opening the stomach, the cause of death at once appeared, in myriads of worms which had destroyed its internal coats in several places. These, of a dark red-colour, and varying from two to four inches in length, were about the twentieth part of an inch in their greatest diameter, and tapered to both extremities. They had collected in throngs of ten or twenty, in different parts of the stomach, and having attacked together particular spots, had formed several round holes. These, after penetrating to the peritoneal coat, took an oblique direction; and in some places were situated in the centre of tubercles formed by the deposition of coagulated lymph.

Of the goat I only found the shells of the horns full of hair, and a portion of the bone of one of the fore legs. The lower part of the intestines contained a light yellowish excrement, which had very little odour, and resembled chalk in consistence.

This animal evidently belongs to that subdivision of the genus *Boa* which has been named *Pytho* by Daudin. The arrangement of the scales on the under part of the tail, is accurately represented in the lower figure of the annexed engraving. In the Appendix †, I have attempted a description of him, which I hope will fix his species.

In addition to the foregoing description, taken from my own observation, I obtained the following facts respecting his habits, from the politeness of Capt. Heyland, who possessed him for several months in Java, and which I cannot do better than give nearly in his own words. "The animal was brought to me early in January, 1813, and did not from that time taste food till the July following. During this period, he generally drank a quart of water daily, and frequently passed a thick yellow excrement. The man who brought him stated, that he had been seen to eat a hog-deer * the day before he had been taken. He was allowed to be at liberty in the

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* *Cervus porcinus* of Linnæus

† Appendix, C.

grounds about my house. One evening early in July, hearing a noise, I went out, and discovered that the snake had left his harbour under the boards of a stable where he generally kept, and having entered a small shed in which some fowls were at roost, had contrived to sweep eleven from the perch, which he afterwards destroyed by pressing them between his folds. Then taking them one by one, head foremost into his mouth, swallowed the whole in twenty minutes. The largest animal that he ate while in my possession was a calf, which he killed and gorged in two hours and twenty minutes. He preferred goats to any other animals, but was also fond of calves, sheep, and fowls; he never attacked dogs, cats, or pigs. Of these last, indeed, he seemed to be in dread, for whenever one was presented to him, he retired to a corner, and coiled himself up with his head undermost. If regularly fed with animals not larger than a duck, he ate readily every day; but after the meal of a goat, refused food for a month."

In the different accounts given by authors of the destruction of large animals by serpents, much discrepancy of statement exists respecting the breaking of their bones. Whilst some have declared that their cracking has been heard at a considerable distance *, others have produced instances of the bodies of large animals in which no "ossifraction" had taken place, having been found in the stomachs of serpents. † The bones of the animals swallowed by Capt. Heyland's snake were not fractured, as far as "a looker-on could discover;" and although many of the by-standers conceived that they heard the breaking of the bones of the goat which he swallowed on board the Cæsar, I am disposed to attribute much to the force of their imagination. I listened attentively, and heard only the snapping of his scales as they slipped over each other during his manifold movements. On opening him after death, I found indeed a portion of one of the goat's legs which seemed to have been fractured; but as the same kind of appearance might have been the consequence of its partial digestion, it is not to be depended on. The truth perhaps is, that the bones of

* Cleyerus de Serpente urobubulum deglutiente.

† Mr. Corse Scott, in the Transactions of the Edinburgh Royal Society, Vol. vi. p. 230.

those animals only are broken which are very disproportionate to the size of the serpent which destroys them.

The statements made by different writers respecting the bulk and form of many of the animals destroyed and swallowed by snakes, have been received with more incredulity than they perhaps deserve. So frightful a spectacle as that exhibited by a buffalo or a tiger struggling with an enormous serpent, may have exalted the imagination of its beholders, and have led them into hyperbolical description; but there is nothing in the mere fact which is contrary to our knowledge of animal power and function. Without going into an elaborate argument to show that the quantity and kind of muscular fibre possessed by a snake twenty or thirty feet in length, must necessarily enable it to perform the feats which have been related of it, I may remark, that the power of the snake, in fracturing the bones of animals by its muscular folds, gives less occasion for astonishment than the removal of the limb of a man by one effort of the maxillary muscles of a shark. And whoever has considered the dilatable powers of a living muscular and membranous bag, will feel no surprise that a goat was swallowed by a snake whose gullet measured six feet six inches, and stomach one foot nine inches, in length; nor will he hesitate to believe, that such a cavity was capable of containing a much larger animal, or that the corresponding organ in a snake of greater dimensions might contain one equal in bulk to any of those which according to some writers have been ingulfed in the entrails of serpents. The difficulty lies in conceiving, how large animals pass the narrow orifice between the jaws, which confine the entrance of the swallow; but this vanishes when the structure of the part is carefully examined. The two bones composing the lower jaw (I take my description from the great snake of Java) are not in contact in front, nor united by an unyielding medium, but are separated by a loose dilatable membrane, and connected with the upper jaw by intermaxillary bones *, which permit an enlargement of the cavity

* This structure is also pointed out by Mr. Corse Scott, in the Edinburgh Philosophical Transactions.

of the mouth by yielding laterally during deglutition. The scales of the throat also admit of considerable dilation, as they are much more remote from each other than any others in the body, and immediately under the mouth are separated by a naked expansible membrane.

I cannot take leave of Java and its animals without saying a few words respecting some of the lizard tribe, which, although very interesting in their habits, have not undergone a very close investigation, and have been very seldom and very slightly described. They press however, more frequently than is always agreeable, even upon the notice of a mere passing visitor in Java. At the approach of evening, a small species which feed on insects, cover the walls, and pillars of houses, and may be seen after their prey in all directions. A stranger cannot at first behold them without some degree of aversion, but soon looks on them with favour when he finds in them the enemies of the musquitoes. This species of Lizard, which seldom grows beyond the length of five or six inches, may be called the house Gecko of Java, and is perhaps the *Chichak* of* Sumatra. It belongs to the subdivision of the genus Gecko, which the celebrated Cuvier has called *Hemi-dactyles*, in having the disk which covers the base of its toes divided into a double row of imbricated plates, and in the position of their second phalanges. † But it differs from the described species of this subdivision in wanting a claw to the great toe. ‡ It is of a light brownish grey colour, and is covered, excepting under the tail, with very small scales, and is without tubercles: under the tail the scales are large and imbricated. The scales when examined with a lens, are found to owe their brownish colour to very minute dark-coloured points. It has a rank of pores extending down the inside of each thigh as low as the knee.

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* Marsden's Sumatra, p. 119.

† Hemi-dactyles ont la base des doigts garnie d'un disque ovale, formé en dessous par un double rang d'écailles en chevron; du milieu de ce disque s'élève la deuxième phalange.

‡ *Les espèces connues ont toutes cinq ongles.* Règne Animal, tom. ii. p. 47.

Geckos of this species possess something of the property of the Cameleon. One of them, which dropped from the ceiling on a table before me, was immediately imprisoned in an inverted tumbler. On falling, it was nearly white, but assumed in a few minutes a deeper hue, and at length almost took the colour of the mahogany on which it rested.

This lizard is very different from the large gecko of Java, of which I have a specimen now in my possession. And the latter does not, as has been supposed, correspond in its characters with the Tokaie of authors, also arranged by Cuvier under his subdivision *Hemi-dactyles;* as it has only one row of transverse imbricated plates covering the base of its spreading toes, and will therefore fall under the subdivision *Platy-dactyles.* *

The following characters are taken from one of the species, which measures eleven inches in length, and weighs 1420 grains. It is of a lead colour marbled with red, on the back and tail, and is of a bluish white tinged with red, on the belly. Its back to the end of the tail is covered with conical tubercles in longitudinal series. These are prominent, acute, and nearly erect on the hinder part of the head, but on the back and upper part of the tail are compressed and directed backwards. Its scales on the head and back are small, round, and disseminated; on the belly are small, oval, and imbricated; under the tail are large, square, and imbricated in a band-like manner. It has a row of large pores before the anus. Its great toes are without claws. These characters bring it very near, if they do not identify it with the *gecko* of Ceylon, the *gecko à gouttelettes* of Daudin, figured in Seba. †

Bontius has stated, that an animal answering in all its characters to the one which I have described, is notorious for its poisonous touch and deadly bite.

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* Platy-dactyles ont les doigts étargis sur toute leur longueur, et garnis en dessous d'écailles transversales." Règne Animal, tom. ii. p. 45.

† Tom. i. pl. cviii.

" Sæva Lacerta rubris stellata in tergore guttis,
" Contactuque nocens, viridi vomit ore venenum
" Mortiferum, superans quæ dant Aconita novercæ
" Hoc tabo inficiunt, metuendi cuspide Javæ
" Tela sua, et certum quæ dant hastilia mortem." *

" Some lizards fierce with bloody spots o'erspread,
" Noxious in touch, and in their bite more dread,
" Envenom'd slime from lurid jaws distil,
" Deadlier than aconite, of swifter ill,
" To Javan arms a certain death impart,
" And give the arrow's wound a keener smart."

The same author tells a fearful tale of the effects produced by its feet upon the chest of a sailor, over whom it walked whilst he slept; the skin becoming covered with blisters like those occasioned by boiling water, and speedily mortifying.† He also declares, seemingly from his personal knowledge, that the Javanese, whom he denounces as "*scelesti veneni propinatores*," poison their arrows by besmearing them with the blood and saliva of the gecko, and obtain the latter by a method which would suit the rites of a Shakespearean witch. He states, that having suspended the enraged animal by the tail, they collect a yellow viscid liquor which it pours from its jaws, and having dried it in the sun, use it as a deadly poison; and by daily feeding the animal in this situation, keep it alive, and excite it to secrete its peculiar venom for several months. ‡

* Bontius, Hist. Natur. et Medic. p. 57.

† Hoc de solo hujus insecti attactu experientia didici, in decumbente quodam socio navali, in Nosocomio nostro Batavico, cujus pectori, dum denudatus dormivit, supercurrerat Lacerta hæc, et, solo contactu, vesicam per transversum in musculis thoracis excitaverat, qualem in cute oriri videmus, a fervente aquâ; ..... subtus vero caro, jam livida erat et ad gangrænam tendens, &c. Bontius, Hist. Nat. et Medic., p. 57.

‡ Javani sanguine, et sanie hujus lacertæ, tela sua tingunt. Tum scelesti isti veneni propinatores, qui hic utriusque sexus plurimi sunt, hoc animalculum è laquearibus funè cauda alligato suspendunt, quod tum præ ira glutinosum et flavum liquorum assiduo è gutture destillat, quem exceptum fictili subtus apposito colligunt, et soli expositum, in

Whether any of the formidable properties attributed to this animal be really possessed by it, I took some pains to ascertain, and found that they were generally discredited amongst Europeans; but obtained no facts that could place the question at rest: it is said to be seldom caught and with great difficulty.

Like the house gecko, it has the power of walking, by a peculiar structure of its feet, against its gravity in an inverted position upon the smoothest surface. * It usually inhabits the hollows of decayed trees, and seldom comes forth till dark, when it occasionally enters the interior of houses, spreading alarm by its peculiar note amongst those who believe in its venomous powers. To every one indeed, and especially to a stranger, it is a disgusting animal. Its large head, capacious mouth, projecting eyes, and tuberculated body, give it a hideous aspect, and occurring to the recollection when its shrill voice is heard in the stillness of the night, excites no agreeable sensations. The first time that I slept at Sirang I was awakened by a singular guttural sound, followed by the loud enunciation of the syllables gĕck-ōō, repeated three or four times, and which having ceased for a few minutes, were again and again renewed. It was in vain to seek for the intruder. The animal, although seeming to be within a few feet, was probably without the house on an old tree; or if in the room, he fled before light and noise, but renewed his interruption when all was again quiet.

Another gecko, about eight inches long, also from Java, and of which I received a specimen, with many other obligations, from Professor Reinwardt, differs from the large gecko in being of a lead colour marbled with white, but resembles it in the form and

massam cogunt, tali modo in vivis hoc insectum alendo quotidie servant ad aliquot menses. Hoc veneno nullum magis præsentaneum reperiri certum est. Bontius, p. 58.

* See Sir Everard Home's account of the organization by which some animals support themselves in progressive motion against their gravity. Philosophical Transactions for 1817. In the same work may be found an admirable engraving of the large Gecko.

distribution of its scales and tubercles. It is a common species, and is considered as perfectly innoxious to man. It sometimes preys upon the house gecko. One of its species which I now possess was knocked off a ceiling whilst holding the smaller animal in its mouth.

CHAPTER III.

On the 21st of June, the Ambassador and his suite having again embarked on board the Alceste, she got under weigh from Batavia Roads accompanied by the General Hewitt, (the Lyra having sailed some days before,) and prosecuting her voyage, fell in, on the 9th of July, with the Orlando frigate, Capt. Clavill.

From this vessel, which had carried out from England intelligence of the Embassy to China, we expected to receive some interesting information respecting the disposition of the Chinese towards us; and were glad to learn that tidings of the Embassy had been favourably received by them. Capt. Clavill also informed us, that Sir George Staunton * and some gentlemen who were to accompany him on the Embassy had embarked on board the Discovery, one of the East-India Company's cruisers, and in company with the Investigator, a similar description of vessel, and the Lyra, had sailed for the Lemma Islands, there to wait for the Alceste. On receiving this information we steered for the place of rendezvous.

For some days before we fell in with the Orlando, we had been sailing on seas liable to those tremendous gales called by the Chinese Typhoons, and had therefore watched with great anxiety every change in the appearance of the sky, and every variation of the barometer. But we experienced nothing to excite our apprehension till the evening of the 9th of July, when the sky exhibited such novel though brilliant appearances, as led us to fear that they would be followed by formidable changes of weather. The course of the sun, as it sunk beneath the horizon, was marked by a vivid glory expanding into paths of light of the most beautiful hues. They did not in the least resemble the pencils of rays which are often seen streaking the sky at sun-set, but were composed of sheets of glowing pink, which diverging at

* For the list of the persons of the Embassy, see Appendix.

Chart of the
CHINA AND YELLOW SEAS,
Showing the Track of the
ALCESTE,
from the time of her leaving
BATAVIA
till her Wreck.
HONG KONG
TIMOUSAN
Longitude East from Greenwich
PEKING
NANKIN
CANTON
TUNG HAI
OR
EASTERN SEA
HAINAN
CAMBODIA
SIAM
PHILIPINE ISLANDS
MINDANAO
BORNEO
CELEBES
JAVA SEA
SUMATRA
MALAYA
FLORIDA

equal distances from the sun's disk, darted upwards from the horizon, diminishing in intensity of colour, till they vanished in the azure of the surrounding atmosphere. In the intervals between these, the sky was of a clear green, spotted with small masses of dark cloud. Our alarm was increased by a slight fall of the barometer, but it was groundless; the wind continued steady, and the sails which had been furled were again spread to a favourable breeze, that enabled us to join Sir George Staunton off the Great Lemma Island on the following morning.

The Lemma Islands appeared to possess sufficient botanical and geological interest, to make me very desirous of an opportunity of examining them; but as they afforded no shelter or convenient watering place for the squadron, our stay was too short to admit of my landing. I was enabled, however, to form some opinion of their structure through the kindness of my friend Capt. Hall of the Lyra, who sent me specimens of coarse granite, approaching to sienite, and quartz that he had taken from them, and which he informed me entered largely into their composition.

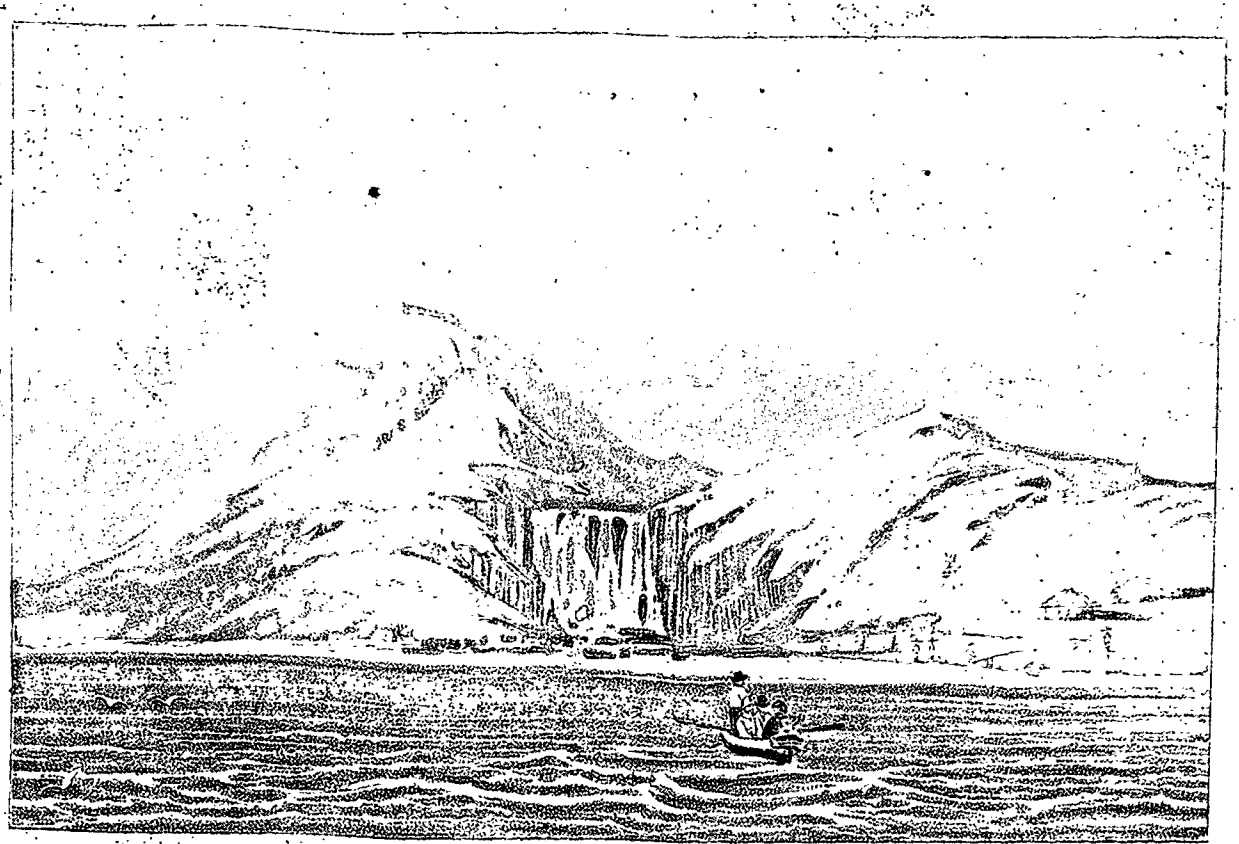
But although unable to explore the productions of the land, I was rather unpleasantly convinced of the reputed property of one of those of the sea. Whilst employed in collecting some sea-weed floating about the ship, I observed a species of *Physalia*, so small and transparent that I at first mistook it for an air-bubble; but on catching it in my hand was soon convinced of my error, for wrapping its long tendrils round one of my fingers it stung like a nettle, but with much more severe effect. In about five minutes the pain in my finger abated, but an uneasy sensation extended up the inside of my arm, which soon terminated in an aching pain in the arm-pit, accompanied by a sense of restriction in my chest: within fifteen minutes all uneasiness ceased. The manner in which the animal produces these effects is, I believe, unexplained; but it is not improbable that they are occasioned by a peculiar poison, secreted by it, and contained in a glutinous matter which covers its tendrils; as this, when applied to the skin, apart from the animal, excites a smarting pain.

The inhabitants of the Lemma Islands who came off to us in their boats were of a light copper colour, and very athletic: they managed their well constructed bamboo vessels with great dexterity. In the evening the squadron weighed and stood for Hong-kong, one of the Ladrone Islands, distant from the Great Lemma sixteen miles in a N. E. direction, off which it anchored at ten o'clock in the evening.

Looking from the deck of the Alceste early on the following morning, I found that we were in a sound formed by some small islands, by which it was land-locked in every direction, and of which Hong-kong is the principal. As seen from the ship, this island was chiefly remarkable for its high conical mountains, rising in the centre, and for a beautiful cascade which rolled over a fine blue rock into the sea. I took advantage of the first watering boat to visit the shore, and made one of these mountains and the waterfall the principal objects of my visit.

This mountain, the highest on the island, is, according to Capt. Ross, who has measured it, about one thousand five hundred feet above the level of the sea, and is composed of trap approaching to basalt in the compactness of its structure. In ascending it, I followed the course of a delightful stream which rises near its summit, and found by its side a number of interesting plants; amongst them the *Beckia chinensis*, *Myrtus tomentosus*, in abundance, and in full flower, *Melastoma quinquenervia*, two other species of the same genus, several orchideous plants, of which I could only determine the *Limodorum striatum*; the *Rubus moluccus* of Rumphius, *moluccanus* of Wildenow; a variety of ferns, but not a single moss of any description. The general surface of the mountain, and indeed of every part of the island of Hong-kong that I was able to visit, is remarkably barren, although in the distance it appears fertile, from a fern which I believe to be the *Polypodium trichotomum* of Kæmpfer *, which supplies the place

* Icones Kæmpferi. Banks.



T. Fielding Sculp.

THE WATERFALL, AT HONG KONG.

Published by Longman, Hurst Rees, Orme & Brown London, March 1811

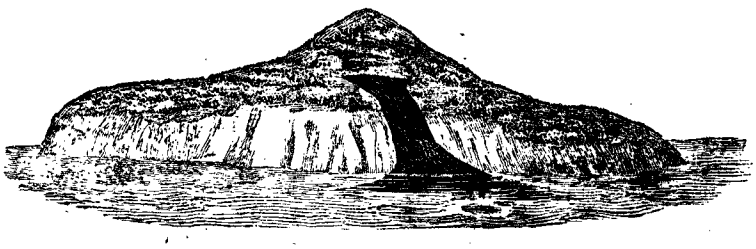
LIBRARY OF THE ROYAL ... SOCIETY

of other plants. I was unable to reach the summit of the mountain in consequence of the excessive heat, which at eight o'clock in the morning raised the thermometer in the shade to 83°, whilst the sun's rays, to which I necessarily exposed myself, darted through an unclouded atmosphere with an almost intolerable effect, and raised the quicksilver to 120°. I ascended about one thousand feet, and returned by a path which passed over a small hill, or rather mound, differing in structure from all the rocks in its neighbourhood, being composed of a very friable stone of a reddish white colour, much resembling disintegrated felspar.

On reaching the shore, I examined the rocks by the water-fall, where they are exposed in large surfaces, and found them composed of basaltic trap, exhibiting in some places a distinct stratification, in others a confused columnar arrangement. It is also divided into distinct, well defined rhomboidal masses, separated from each other by very obvious seams, in which I frequently found cubic crystals of iron pyrites. Having laden myself with all the specimens of plants and rocks, which I had the means of carrying, I returned on board the Alceste.

At day-light the following morning, I again visited the land, and directed my researches to a small island separated from Hong-kong by a channel not more than a hundred yards wide. It afforded me very few plants except the *Polypodium trichotomum*, but it presented several geological facts of much interest. This island, which has no name on charts, rises not more than forty feet above the sea, does not exceed three hundred yards in its largest, or one hundred in its smallest diameter, and is entirely composed of two kinds of rock, granite and basalt. Their junction exhibits some curious facts. On the north side of the island, where this is most obvious, it is occasioned by a dyke of basalt passing upwards through the granite, and spreading over it. This dyke rises from a body of basalt which stretches beneath the granite in a north-westerly direction, and vanishes beneath the surface of the sea. It is not in immediate contact with the granite, but is separated from it by three narrow veins

which interpose between them, and follow the dyke through its whole extent. The width of each of these veins does not exceed four inches; that of the basaltic dyke is as many feet. The veins are of three kinds: 1st, a compound of granite and basalt mixed together in an indeterminate and confused manner; 2dly, pure felspar; and 3dly, a sort of porphyry, composed of very perfect crystals of felspar in a basaltic base. The veins of pure felspar and of porphyry were separated with ease from each other, and from the neighbouring rocks; but the felspar and basalt in mass, which was intimately combined with the basaltic dyke, could only be separated from it with great force. Near the line of junction of the granite with the basalt, I found masses of the latter imbedded in the former. * I lamented much that I could spend but two hours in the investigation of these facts, but it would have been hazardous to have given more time to them, as the Alceste was expected to sail early that morning.



I may now be expected to give some description of the scenery and inhabitants of Hong-kong, but of either I have little to say. Its scenery is composed of barren rocks, deep ravines, and mountain-torrents, but presents few characters of a very picturesque description. Of its inhabitants none were seen but some poor and weather-beaten fishermen, spreading their nets, and drying the produce of their toils on the rocks which supported their miserable mud-huts. Its cultivation corresponded with the apparent state and

* When at the Cape, I saw veins of granite passing through killas, but masses of killas were imbedded in the granite.

number of its population. Patches of rice, small plantations of yams, and a little buck-wheat, were all their visible means of vegetable support.

Hong-kong sound is represented by my naval friends as affording admirable shelter for ships of any burden; but its description in this point of view does not fall within my province.

His Excellency, during our stay here, received despatches from Macao, with the Emperor of China's reply to a report made by the Viceroy of Canton, relating to the expected arrival of the British Embassy, from which he learnt that orders had been issued to the Viceroy of Pe-tchee-lee, and other high Mandarins who were likely to have any communication with the mission, to receive us "in a liberal, gracious, safe, and suitable manner."*

Elated with this auspicious intelligence, we sailed from Hong-kong on the 13th of July for the Yellow Sea. The south-west monsoon favoured our progress till the 20th, when, being off the coast of Corea, the wind shifted to the northward, and brought with it large flights of *Libellulæ*. It continued variable, but not unfavourable, during the remainder of the voyage to the gulf of Pe-tchee-lee; and although we frequently experienced severe thunder and lightning, nothing approaching to a gale of wind interrupted our agreeable progress through a smooth sea. Neither did we meet with any of those thick fogs described by the historians of the former Embassy, whose tract we followed as far as the streights of Formosa. These we entered on the 15th, and on the 16th passed a small island not correctly laid down in any chart, and which was ascertained to be in latitude 25° N., and in longitude 119° 32′ E. On the 17th we cleared these streights, shaping our course well off the land, and on the 18th passed the Chusan Islands. On the 21st we made some islands off the coast Corea, and on the 26th anchored for the night amidst the Mee-a-tau Islands, which exhibited a distinct stratification, and appeared

* See Edict I. in Appendix, E.

to be of a schistose structure. I examined the soil brought up by the anchor in their neighbourhood, and found it to contain ten per cent. of lime; the residue was clay coloured with iron. Early in the morning of the 27th, we passed between two of them in twelve fathom water, entered the gulf of Pe-tchee-lee, and anchored on the 28th in five fathoms, fifteen miles from the mouth of the Pei-ho. The Lyra, which had been sent a-head on the 25th, to announce our approach, had anchored in three fathoms, only six miles from the shore.

The height of the barometer varied very little during our voyage from Hong-kong, but the thermometer and hygrometer underwent frequent changes. The former, which generally stood at noon in the bay of Hong-kong at 85°, fell gradually by the 27th to 74°, but rose after our entrance into the bay of Pe-tchee-lee to 83°. The hygrometer whilst the S. W. monsoon prevailed, indicated a saturated state of the atmosphere, but suddenly marked a diminution of moisture whenever the wind changed to the north. This was strikingly exemplified on the morning of the 26th, when I observed Leslie's hygrometer, which for three days had stood at zero, rise to 30°, and on looking at the direction of the wind, I found that it had changed from south-west to north. A similar change in the hygrometer also took place, even when the northerly wind was accompanied by a heavy fall of rain. Thus, at noon on the 24th, the wind being S. W. a large mass of clouds came up with wind from the northward, and discharged themselves in heavy rain. * During its fall the hygrometer, which had previously been below zero, rose to 6°. I can perhaps give no better notion of the excessive moisture of the atmosphere in the China seas during the S. W. monsoon, than by stating that Leslie's hygrometer is not graduated to a sufficient extent to mark its degree, that our clothes were as wet as if they had been exposed to a smart shower of rain, and that no metallic instruments, however packed, were secure against its penetrating influence.

* The barometer at the same time rose eight lines.

A change of weather also followed the variations of the barometer, however inconsiderable. Its rise like that of the hygrometer usually indicated northerly winds; a fall of four lines was followed by rain; and a fall of a tenth of an inch, by thunder and lightning.

The many accounts I had heard of the dreadful effects of Typhoons, induced me to collect such particulars respecting them, as I could obtain from some gentlemen of the East-India Company's service, who had witnessed them. My enquiries were directed to the state of the barometer, and of the atmosphere, previous to their approach, and during their continuance; to the influence which the moon might exercise over them, during her changes; to the extent of latitude and longitude through which they have been known to occur; and to the seasons of the year in which they were most frequent. I gathered the following information from the answers I received. The mercury in the barometer falls slowly for several hours before the commencement of the Typhoon, descends during its continuance below 27 inches, and its re-ascension is a sure indication that the storm is subsiding. These barometrical movements are not accompanied by any constant atmospherical changes. The storms occur more frequently during the changes of the moon than at her full. They seldom prevail below 10° N. Lat. or beyond the tropic of Cancer. They are felt as far as 130° E. Lon., and are most violent in the China seas during the S. W. monsoon, especially in the month of July. It is also stated that the wind is most violent when it blows in the direction of the monsoon, but that it also blows strong from all points of the compass, through which it is continually shifting; but before the commencement of the gale is generally light.

The state of the thermometer has been little attended to either before or during its continuance, and that of the hygrometer still less; it appears, however, that the air feels very cold during its prevalence, and that it is frequently accompanied by storms of thunder and lightning, with heavy falls of rain impelled in a horizontal direction.

It is much to be regretted that a full account of the phænomena of Typhoons has not yet been given by those who have often expe-

rienced their violence, from which some or other of our ships, especially Indiamen, yearly suffer. It is also to be lamented that the hygrometer, especially Leslie's, is not more used as a meteorological instrument. During my voyage I repeatedly experienced the peculiar delicacy of this instrument in indicating changes in the humidity of the atmosphere; and as all winds are probably charged with their peculiar moisture, this instrument would express their slightest variations. And I have no doubt that by repeated observations a hygrometrical scale might be formed which would be of great utility to the mariner.* Mr. Leslie's instrument requires, however, a little modification before it can be applied with effect in those latitudes in which the air is saturated with moisture. At present its scale is graduated to about 120° marking the point of greatest dryness, and zero the point of greatest moisture: this last point is placed at the extremity of the scale near the bulb. In using this instrument in the China seas during the S. W. monsoon, I found that the fluid of the instrument remained in that part of the tube which is between the bulb and zero. Might not this part of the instrument be lengthened, and zero marked higher up?

Whenever this instrument indicates a saturated state of the atmosphere at periods when changes of wind are probable, such change may be expected to be sudden and violent. For if a large body of very humid air come in contact with a wind colder than itself, its moisture will suddenly be precipitated, which producing a comparative vacuum, either the wind which occasioned it will blow with great violence, or if the subversion of the equilibrium has been extensive, every point of the compass will contribute to its restoration. That something of this kind occurs in the Typhoons of the China seas, and in the hurricanes of the East and West Indies, appears very probable from the consideration of the circumstances attending them. These storms are generally most severe near the land, and in narrow seas between the tropics, and during the hottest

* See on this subject the Observations of Krusenstern, Péron, and Humboldt.

seasons of the year when the air is most rarefied and contains the greatest quantity of moisture. They are more general also at those periods when a change of wind is expected, as when the moon enters her different quarters, and at the change of the monsoons.

During our voyage up the Yellow Sea, I made many experiments on the temperature of the water at different depths. The statement of the greater part of them I lost in the shipwreck of the Alceste, with many of my other papers. I have exhibited the results of those which I preserved an account of in the annexed table.

	Date. 1816.	North Latitude.	East Longitude.	Current.	Depth in Fathoms.	Temperature of			Difference of Temperature between	
						Air.	Surface.	Bottom.	Air and Surface.	Surface and Bottom.
1.	July 23. 8 A.M.	35. 1.	123. 46.	11 Miles.	40.	76°	74°	65°	2°	9°
2.	——24. 12 M.	36. 24.	122. 59.	—	15.	75°	71°	67°	4°	4°
3.	——25. 8 A.M.	37. 30.	122. 40.	—	20.	72°	67°	62°	5°	5°
4.	—— 8 P.M.	——	——	—	15.	74°	69°	66°	5°	3°
5.	——26. 6 A.M.	37. 58.	121. 34.	—	15.	74°	67°	66°	7°	1°
6.	——27. 11 P.M.	38. 12.	120. 20.	7 Miles.	15.	75°	74°	72°	1°	2°

They were made with a hollow brass cylinder capable of containing about ten ounces of water. Valves at the top and bottom permitted the ingress of the water as the instrument descended, but prevented its egress when drawn up. A thermometer with Fahrenheit's scale graduated to degrees was attached to it. Each experiment was repeated several times, and the instrument allowed to remain at the given depths for unequal periods, with the view to ascertain if any difference of temperature would be the consequence. These periods varied from five to ten minutes, but in no instance did any alteration of temperature occur. The water was drawn each time from the bottom; soundings always having been taken before the experiment was made.

The four first experiments were made in open sea, the fifth in

the midst of the Mee-a-tau Islands, and the sixth in the Gulf of Pe-tchee-lee.

From these experiments it appears that the sea diminishes in temperature in proportion to its depth, and that the difference of the temperature of the surface, and any given depth within a certain range, is greater at sea than near the land, and that the difference of the temperature at the surface and bottom is greatest when that of the air and surface is least.

But these experiments are not in themselves sufficiently numerous to warrant positive results to be drawn from them. In reference to those of others they are more important, and in the Appendix * I have compared them with many which have been made by different observers on the temperature of the sea at different depths.

The Lyra not being able to communicate with the Alceste by signal in consequence of the haziness of the weather, changed her birth and anchored close to us during the night of the twenty-ninth. On the following morning, Captain Hall came on board the Alceste, with information that he had been visited the evening before by two Mandarins, who stated that the Viceroy of Pe-tchee-lee might be daily expected at the mouth of the Pei-ho to receive the Embassy.

On the first of August, the same Mandarins waited on His Excellency with intelligence of this Viceroy's disgrace, and of another having been appointed to succeed him. They added that a messenger had been despatched to the latter with the news of our arrival, and that three officers of high rank appointed to take charge of the Embassy were already at Ta-koo, and they requested that two of the gentlemen of the Embassy might be sent to compliment them on their arrival.

The bearers of this information were of low rank; one wore a crystal, one an ivory, and two of them gold buttons. They were tall, robust, and stately men, of very impudent deportment, endeavouring to pass themselves off for *Ta-Gin*, (great men:) a title only given to those of their countrymen who are much their superiors in rank.

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* See Appendix, F.

They were received in some state by His Excellency, who, dressed in his robes, and attended by Sir George Staunton and Mr. Ellis, waited for them in his cabin, to which they were conducted by Mr. Morrison through a passage formed by the other gentlemen of the Ambassador's suite. Having remained a few minutes in conference with the commissioners, and having partook of cherry* brandy, they left the ship, accompanied by Mr. Morrison and Captain Cooke.

These gentlemen returned to the ship the next morning, having seen the Imperial Legate and two other officers of high rank, who were to possess the chief conduct of the Embassay. Quang was the name of the Legate. Chang and Yin the names of his coadjutors. The two latter, when Mr. Morrison and Captain Cooke left the shore, were intending a visit to the Ambassador as soon as the wind, which was then high, should moderate. The weather, however, for two days disappointed our curiosity to see them. But the morning of the fourth of August proving fine, we began at an early hour to look for their approach, and by ten o'clock in the forenoon observed some large junks with the insignia of high mandarins standing towards the ship. They contained Chang and Yin. Two officers of inferior rank were despatched a-head in a small vessel to announce their coming, and were the bearers of their cards of compliment. Chang and Yin arrived in less than an hour after them, and were saluted by seven guns. Captain Maxwell, Captain Hall, the other commanders of the squadron, and the officers of the Alceste in their full dress uniforms, received them on the quarter deck; the marines presenting arms, and the band playing, as they passed below to the state cabin, to which they were conducted by Sir George Staunton and Mr. Ellis, and were received at the door by His Excellency in his robes.

These Mandarins were in appearance much above the middle age. Chang, the elder, wore the opaque blue button; Yin, the opaque red

* The Embassy found, in every part of China, cherry brandy the most seducing cordial that they could offer to a Chinese palate.

button. Chang was a civil and Yin a military Mandarin. They had intelligent countenances and easy engaging manners. But Chang was graver than Yin, who had already ingratiated himself by his smiles. They gave me no very exalted notions of Chinese magnificence; being both very plainly dressed, and attended by a train of very shabby looking fellows. Yin was accompanied by several soldiers, who did not add to the dignity of his cortège. Indeed the appearance of the whole party was strikingly contrasted with the very tasteful and imposing splendour which surrounded them on board the Alceste. Her clear and ample decks, her well arranged rigging, her formidable artillery, her men prompt and orderly, and her officers in full uniform, formed a picture of propriety and order, of magnificence and power.

When Chang and Yin entered the Ambassador's presence, their attendants who attempted to follow them were detained in an anti-room. They expressed the greatest curiosity to obtain a sight of His Excellency, often attempting to open the door of his cabin, and looking much displeased at being prevented. The persons of these men threw off a most disagreeable odour, arising in some measure from their use of garlic and assafœtida, but more from their want of cleanliness. It was some time before I could bear this repulsive atmosphere with sufficient composure to examine the various parts of their dress, which had much in novelty at least to attract my attention. Each man wore by his side a variety of accoutrements, which on a first glance seemed to be intended for warlike purposes, but on a close examination dwindled into very peaceful appendages. A worked silk sheath, in shape like the blade of a dagger, enclosed a harmless fan. A small leather bag, studded with brass, and resembling a cartouche box, supplied flint and steel for lighting their pipes. These hung sometimes from their girdles by the side of their chop-sticks, but were frequently in their mouths, pouring forth volumes of smoke, and giving rise to a flow of saliva which was discharged without any attention to place.

Both mandarins and attendants wore girdles fastened with clasps

formed of different kinds of stone. Of these a coarse green agate, lapis lazuli, and a stone called Yu, were the most general. Of the agate I could learn nothing; the lapis lazuli was said to be common on the island of Hai-nan; the Yu I shall have occasion to mention hereafter.

The audience having terminated, Chang and Yin left the ship under the same honours with which they had been received. As soon as they were gone, a junk came alongside with a present of bullocks, sheep, pigs, bags of rice, chests of tea, sugar, candles, and numerous other articles, intended as a supply to the squadron. But they were not proportionate, especially in bullocks, to the number of ships. The Chinese explained the deficiency, by stating that ten oxen had been drowned in attempting to embark them during rough weather; but they showed no disposition to replace them. With the provision was brought a large quantity of fuel, consisting of charcoal and of coal. The former, as far as I could judge from some partially charred branches not deprived of their bark, was made chiefly from the oak. The latter contained little bitumen resembling plumbago rather than coal, and had been brought according to report from the neighbourhood of Pekin.

The junks which conveyed these supplies were the most clumsy looking vessels imaginable, but were skilfully managed by the Chinese sailors. Although their tall masts, each of one entire tree tapering upwards, frequently surpassed our main mast in height, and were consequently liable to injure our yards, no accident occurred. They were provided with excellent cordage made from the fibre of a plant which grows on the banks of the Pei-ho. Their anchors were of wood and of iron; the former had only one fluke, the latter several, and were formed like the grapnels of our boats. * They

* De Guignes describes a similar anchor used by his boatmen on the Grand Canal to fasten their vessels to the shore. "Dans le cas où le bateau s'éloigne trop du rivage un matelot porte alors une ancre à terre; et l'on vire dessus pour s'en rapprocher: ces ancres, ou plutôt ces grappins ont quatre branches, dont trois sont pointues, et la quatrième a un anneau auquel est attachée une chaîne de fer qui sert à deraper l'ancre." Voy. à Pek.

differed, however, from them in having a rope fastened to a ring in one of the flukes by which they could be drawn up with great ease.

The men who navigate and probably live in these junks, subsist chiefly on millet rendered gelatinous by immersion in hot water. With this they eat a savoury preparation of vegetables cut into small stripes, and preserved in a kind of soy. At their meals each takes a basin of millet to himself, but the savoury dish is common to many. In eating they bring the basin close to the lips, and shovel its contents by means of their chop-sticks into their mouths till they are fully crammed; then wedging in a morsel of the *piquant* vegetable, masticate the whole together. Having finished their repast, they wash their mouth with the water in which the millet had been steeped.

The visit of Chang and Yin led to the arrival, on the following day, of junks for the reception of the presents intended for the Emperor of China, and of the baggage of the Embassy. The greatest activity being immediately used in trans-shipping them, it was reported on the evening of the next day, that the whole of the presents, and a considerable portion of our stores were safely on board the Chinese vessels. Mr. Davis and Mr. Cooke visited the shore on the morning of the 6th of August, to ascertain whether the boats intended for our conveyance through the country were in readiness, and returned in the evening with the information that every thing was prepared for our reception. Junks came off at an early hour the next morning for the residue of our equipage, but were obliged by rough weather to make for the shore after receiving a part of it only. The whole of the 8th proved so stormy as to prevent all communication with the land. But the next morning being fine and calm, it was announced by nine o'clock that all our baggage had been embarked, and that junks were in readiness to convey us to the shore. These having received the servants, band, and guard, waited for His Excellency at a short distance from the ship.

At 12 o'clock at noon of the 12th of August, Lord Amherst and the gentlemen of his suite left the Alceste in his barge. The yards of the squadron were manned on the occasion, and successive salutes

and cheers bade us farewell from every ship. On reaching the junk intended for our conveyance to the mouth of the Pei-ho, it was found very inadequate to the accommodation of the whole party, unless they stood exposed on its deck to a burning sun. A few, therefore, took refuge under the awning of the Ambassador's barge, which was towed alongside.

Having in this manner arrived within a short distance of the mouth of the Pei-ho, Capt. Cooke was despatched a-head in a small boat to announce our approach to the Legate. The Ambassador and his train at the same time changed their situation from the junks to the boats of the squadron which had accompanied us; and were now arranged, under the direction of Capt. Maxwell, into a picturesque order, in which they proceeded up the river.

The entrance into China by the mouth of the Pei-ho is entirely destitute of interest. The shores are flat, barren, and marshy: a few reeds alone giving them an appearance of verdure. Some mud forts situated on the banks, saluted the Embassy repeatedly with three guns. A band of gaudy troops also met us at the mouth of the river, and having been passed, moved off to reappear higher up.

About an hour after leaving the junks, we arrived at Ta-koo, the first collection of huts that deserves the name of a village on the banks of the Pei-ho. It was here that the boats prepared for our reception were arranged along the right bank of the river; each vessel carrying at the mast-head a flag, on which was inscribed, in large Chinese characters, Koong-Tsou, Tribute Bearers! The Ambassador's yacht communicated with the shore by a bridge of bamboo and painted matting. The Legate paid his respects to His Excellency soon after our arrival, and expressed great anxiety that we should commence our voyage as soon as possible; but as no part of our personal baggage had been landed, our departure was necessarily delayed till the next morning. He however immediately set out by land to prepare for our reception at Tien-sing.

We found the banks of the river covered on our arrival with a

crowd of people assembled to see the Embassy; and forming a most motley group. In front were mandarins and soldiers, tawdrily dressed and variously armed; behind, the mob of all classes and complexions, some in white robes, others quite naked, some in immense hats, others with parasols, many bare-headed, and all with long tails. This diversified mass was suddenly thrown into confusion by a party of soldiers, who, flourishing whips on all sides, opened a passage for a number of servants, carrying trays laden with all kinds of provision in profuse abundance. These formed a present from the Legate to the Ambassador and his train, and were placed in order in the fronts of the boats of the three commissioners. It would be impossible to particularise the different parts of this ostentatious supply. It comprised all sorts of dressed meat, of sheep roasted in halves and quarters, pigs and fowls in abundance, innumerable Chinese made dishes, amongst others, stewed sharks' fins, stags' sinews, birds' nests, and sea-slugs *, pyramids of cakes and sweetmeats, a large quantity of pickle, and several jars of wine. A part of these formed our dinner; and as it was the first time of partaking of Chinese fare, curiosity induced us to taste the made dishes, but their flavour did not tempt us to do more. The joints of mutton, pigs, and fowls, were so besmeared with a kind of varnish, that they exhibited a perfect metallic polish, and seemed so much more adapted to please the eye than gratify the palate, that we did not attempt to injure the brilliancy of their surface.

At the close of day we went in search of our boats, and on finding them, discovered that no part of our personal baggage had been landed,

* These animals, the bitch de mer of the Portuguese, are in the greatest estimation among the Chinese, who purchase them of the Malays, by whom they are collected in large quantities from the coast of New Holland. They frequent especially the Gulf of Carpentaria, where they find these animals in abundance. Mr. Brown observes, Annals of Botany, Vol. I. p. 395., "They collect two kinds of this animal: the one black, called by the Chinese batoo, of double the value of the other, which is white, and called by them roro. A hundred pikol are a load for a prao: the price of the better kind is forty dollars the pikol, of the inferior, twenty." Mr. B. supposes the animal to be a species of *Doris*.

and we in vain endeavoured to persuade the Chinese to take our cots from the junks: bare boards formed our resting places for the night. The novelty of our situation would alone have prevented our obtaining any sleep, had not myriads of musquitoes kept us perpetually on the watch. These tormenting insects were more virulent on the banks of the Pei-ho near the sea, than I had elsewhere found them; their sting indeed was so intolerable, that it was impossible to remain quiet in any place where they abounded, and no place was free from them. In vain I endeavoured to escape them: wherever I went, they either followed or received me; and whatever change of situation I made, seemed to be a change for the worse.

Early the next morning we took possession of our respective boats, but found them very defective in their accommodation for the number of persons whom they were intended to convey. As however we expected to obtain others in a few days at Tien-sing, and were anxious at starting not to disoblige the Chinese, we made ourselves as comfortable in them as they would permit, and prepared, though not without a murmur, for our voyage. We had little cause to look forward with much pleasurable anticipation to the liberty which we were likely to enjoy during our passage through China. Whilst we remained at Ta-koo, a piece of ground, not a hundred yards square, was divided off for our perambulations, and kept by soldiers, who would on no account suffer us to pass beyond it. It was therefore with no very pleasing expectation that we heard the gong give the signal for departure at ten o'clock in the morning of the tenth of August.

And now my reader is perhaps as anxious to learn, as I was to see, all that is worth observation between Ta-koo and Tien-sing; but let me prepare him for disappointment. No country in the world can afford, I imagine, fewer objects of interest to any species of traveller, than the banks of the Pei-ho between those places. The land is marshy and sterile, the inhabitants are poor and squalid, their habitations mean, dirty, and dilapidated, and the native productions of the soil are few and unattractive. The scenery had only novelty and strangeness to recommend it; but had it possessed the attractions

of Arcadia, they would have been polluted by miserable objects of wretched and naked men, tracking our boats and toiling often through a deep mire under a burning sun. These poor fellows were attended by overseers, who kept them to their work, and prevented their desertion, but did not, as far as I could observe, exert their authority with cruelty. Scarcely had our eyes become in some degree familiarised with their appearance, when they were offended by the sight of a dead body frightfully swollen, lying on its back, and floating down the river. Our boatmen passed it without regard. I must confess, that in turning from the contemplation of such objects, I recovered with some difficulty that state of mind which was necessary to an unprejudiced examination of the country through which I was passing.

The banks of the river during our first day's journey were not much above its level, and seemed to be formed partly by its depositions, and partly by soil scraped from its bottom, and frequently contained long beds of shells, which gave them a stratified appearance. The country beyond them was low, and could seldom be distinguished from the boats, but when seen exhibited a dreary waste, unbroken by marks of cultivation. Patches of millet, interspersed with a species of bean, occasionally surrounded mud-huts, on the immediate margin of the river; but their produce could scarcely be considered equal to the support, even of those people who assembled to see the Embassy pass. Of these, much the greater number were men miserably clad, having little else than a thin covering to their loins, and many were without even this essential to decency. The few women who mingled with them appeared to be quite insensible to the nudity of their neighbours; who were so far from considering it offensive that they frequently applied the only article of clothing, which they possessed, to their shoulders.

The dwellings of these people were built of mud, had no windows, but were exposed to the weather by a hundred apertures. When they were in sufficient numbers to form a village, the house of a mandarin of low rank was generally seen in their neighbourhood. This was

usually of a square form, and built of sun-dried brick of a blue colour, and covered with a shining roof. Around it was a wall, in front of which stood a high upright pole bearing a flag, inscribed with large Chinese characters. Over the enclosure I often observed a row of female heads, which looked as if separated from their bodies, and planted upon it: they always disappeared, however, when attentively gazed on.

Amongst the objects which attracted our attention during the day, the large stacks of salt described by Sir George Staunton and Mr. Barrow were most conspicuous. These were not however composed of bags, but of loose salt, which in most instances was covered with bamboo matting, under a coating of clay. In others, it was partially or wholly exposed. In the last case, men were turning it over with shovels, and exposing it to the sun. It was stated by some of our Chinese attendants, that it was formed in pits, near the spot on which we saw it.

During our second day's journey, we were often amused by observing a man or a boy floating down the stream astride on a bundle of rushes, and directing his course by a single paddle. That the Chinese should be dexterous in supporting and guiding themselves in water, was little surprising to me when I contemplated the many children who inhabited the banks of the river, and were constantly sporting in its stream.

As we advanced, the country gradually, though slowly, improved. The patches of millet became of greater extent; and we saw a greater number of people perfectly clothed. This alteration of character was still more apparent when we approached within a few miles of Tien-sing. Large fields of corn and pulse were now frequently contiguous, the dwellings more substantial, and the inhabitants more healthy and robust than any we had before observed. The number of people indeed who lined the banks of the river, and the numerous boats which blockaded our passage, for the last two or three miles before we reached this city, was incalculably great. But it must not be supposed that they formed its own population only;

since their amount was unquestionably swelled by the inhabitants of the country for miles around. And even of the multitude whom we saw, an inaccurate judgment was liable to be formed. It was not a fixed body of people. Those Chinese who had taken their stations most remote from the city were the first to obtain a view of the Embassy, but not satisfied with a single glance, moved with us, increasing successively the numbers before whom we passed. But as they were obliged to go behind their countrymen, who would not relinquish their posts on the margin of the bank, their change of situation was not readily observable.

The appearance of the people, who were of all classes, was rather that of inhabitants of different climates than of the same district. The dark copper colour of those who were naked contrasted so strongly with the paleness of those who were clothed, that it was difficult to conceive such distinct hues could be the consequence of greater or less exposure to the same degree of solar and atmospheric influence: * but all conjecture on this subject was set at rest by repeated illustrations of their effects. Several individuals, who were naked only from their waist upwards, stripped themselves entirely for the purpose of going into the water, to obtain a nearer view of the Embassy. When thus exposed, they appeared, in the distance, to have on a light-coloured pair of pantaloons. But difference of colour was not the only variety of character observable in them. The eyes of those whose complexion was dark, had less of the depressed curve in their internal angles, so remarkable in the Chinese in general, than of those who were of a lighter tint. Indeed in some

* De Guignes makes the following observations on the complexion of the Chinese: Le teint des Chinois est d'un brun-clair; mais cette coûleur varie suivant la qualité des individus et leur profession. Les coulis, les matelots, les ouvriers, et les laboureurs, plus exposés par état à l'ardeur du soleil, sont plus bruns, et même d'un brun-foncé; tandis que l'homme en place a le teint plus clair, plus blanc, et quelquefois fleuri. Voy. à Peking, Tome ii. p. 159.

instances, as I especially observed in my boatmen, this peculiarity entirely disappeared. Can these modifications of physical character depend on varied circumstances of individual habits in the same climate?

The land along the banks of the Pei-ho, from Ta-koo to Tien-sing, bears the strongest marks of recent formation; consisting of clay and sand, in nearly equal proportions, and being free from the smallest pebble. The beds of shells alternating with strata of earth, of unequal thickness, mark its periodical but unequal accumulation by the soil which is brought down by the river at different seasons. The debris of the Tartar Mountains afford no doubt the materials of its composition. Whilst the larger fragments of rocks are retained near their base, to exhibit perhaps in other times the phenomena of breccial formations, their comminuted parts are rolled on and deposited near the mouth of the river, and may at some distant period constitute rocks of uniform stratification and structure.

The Embassy arrived at Tien-sing, at 4 o'clock in the afternoon of the 12th of August, the third day after leaving the mouth of the Pei-ho. Soon after our arrival, it was announced that Lord Amherst would have a conference with the Legate and Soo-ta-jin, a Mandarin of high rank, on the following day, and partake at its close of an imperial feast, to which the gentlemen of his suite were also invited. We therefore set out the next morning at ten o'clock, in procession, for the hall of audience: the commissioners and suite travelling in sedans, preceded by the servants, guard, and band on foot.

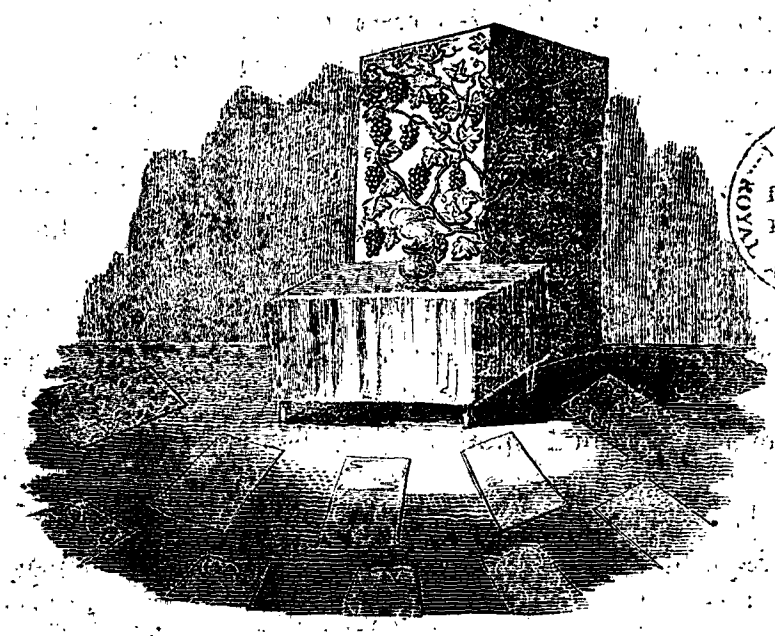
We traversed several narrow streets lined on both sides with shops much ornamented; having large and high boards painted of a red colour, and inscribed with Chinese characters in black and gold, standing in their front, and forming a gay, and rather pleasing vista. Their various articles for sale were indicated by a number of curiously-shaped emblems hanging in rows before them. Great crowds had planted themselves in every direction to see us pass, amongst whom the utmost silence and order prevailed; and although they exhibited an anxious curiosity to obtain a peep at the inmates of the sedans,

not a single instance of troublesome importunity occurred. Very few women were observed amongst them. Those of whom we caught a passing glimpse, were peeping from behind the men, and withdrew their heads the instant they perceived themselves noticed. A great many well-dressed and interesting-looking children were held up to see the procession pass: many of them had so little of the Chinese character in their faces, that they would scarcely have attracted attention in an English crowd. The men were generally well made, and frequently tall; and I did not observe in them that uniformity of countenance which I had been led to look for in the Chinese. In different parts of the city, we passed through archways of considerable width, serving as entrances to principal streets. In these hung swords, shields, bows and arrows, and other arms.

Having been carried about for nearly an hour, we arrived at our place of destination, and were immediately shown into a spacious apartment, formed of bamboo and painted matting, and erected for the occasion. It is difficult to describe the glittering and tawdry magnificence which now suddenly opened upon us. An immense number of painted lamps, pictures, and other ornaments, in all the colours of the rainbow, hung about us on every side; whilst a crowd of Mandarins, in their dresses of ceremony, rendered the animated part of the scene no less striking.

Lord Amherst, Sir George Staunton, Mr. Ellis, and Mr. Morrison, having been shown into an inner apartment, to confer with the Legate and some other Mandarins, the gentlemen of the suite were left to contemplate at their leisure the objects around them. The room was of a broad oblong, approaching to an oval. At one extremity, a projecting canopy decorated with scarlet silk overhung a long range of tables covered with scarlet cloth. On these were placed rolls of silk and cotton of the most dazzling colours, intended as presents for the Embassy. The floor of this division of the room was raised above its general level. Immediately in front of it, two rows of small low tables were placed on the right and left hand for the feast, having by their side carpets and silk cushions for the accommodation of the

guests. Beyond them was a screen of curious workmanship, representing a vine in full fruit. The whole was worked in relief. The fruit was imitated in glass (the Chinese said gems) of different colours, with which the artist had expressed, with great effect, its different degrees of ripeness, transparency, and bloom. The leaves and ten-



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drils, formed of the same material, were equally well executed; and the trunk carved from the wood of the screen in every respect resembled what it was intended to represent. A table covered with yellow cloth, and supporting a vessel of smoking incense, stood before it: the whole was symbolical of the presence of His Chinese Majesty. All around this sacred emblem, carpets were laid in regular approach for the accommodation of its faithful votaries. Beyond these, an open space was terminated by a stage, gay with all the colours that Chinese fancy could suggest. Pots of flowers and dwarf trees were distributed over the room, and were often mingled with pieces of limestone. Along its sides tables and benches were arranged for the use of the Mandarins in waiting, who regaled themselves with

tea, ice, and fruit. The Mandarins were rather gorgeously dressed, although their external garment was plain; being a loose crape robe, with no other ornament than a stork or a tiger, denoting their civil or military order, worked on the back or breast. Beneath this, and disclosed by its movements, appeared a silk petticoat, beautifully interwoven with gold and silk, in the forms of dragons and flowers. Their boots were of satin, and served them for pockets. Their caps were small and conical, covered with long red hair, and surmounted with a globe, whose colour indicated their rank. Fans, pipes, and chop-sticks, hung by their sides; and English watches, in embossed cases, were suspended from many of their girdles. These were highly prized by the wearers, who anxiously enquired our opinion of their value.* Their fans were not costly in their materials or construction, and in no respect resembled those elegant specimens of Chinese workmanship which are imported into Europe from Canton; being formed of paper and Japanned wood, with a few devices faintly sketched upon them. A supply of these was distri-

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* In every part of China, through which the Embassy passed, watches were considered as objects of the greatest curiosity. The attendants of the Embassy were perpetually requested to dispose of their's. I was not, however, able to ascertain, whether they valued them as markers of time, or simply as curious baubles. That they use them, however, as horaries, is probable, as the division of the Chinese day nearly resembles our own. The Chinese reckon twelve hours to each day. The first hour begins at eleven at night, and finishes at one in the morning. Each hour is divided into two Poen-chy, (half hour); each Poen-chy into four quarters, named Chy-ke. The hours are generally named according to their succession, as Tse-chy, first hour; Tcheou-chy, second hour. They also receive the names of animals; as,

1.	*Chu*,	Rat.	7.	*Ma*,	Horse.
2.	*Nieou*,	Ox.	8.	*Yang*,	Sheep.
3.	*Hou*,	Tiger.	9.	*Heou*,	Monkey.
4.	*Tou*,	Hare.	10.	*Ky*,	Fowl.
5.	*Long*,	Dragon.	11.	*Keou*,	Dog.
6.	*Che*,	Serpent.	12.	*Tchu*,	Hog.

See De Guignes' Voyage à Peking, Tom. ii. p. 425.

There can be no doubt, as far as the experience of the members of Lord Amherst's Embassy goes, that watches are the most acceptable presents, on a small scale, that can be offered to the Chinese of all ranks.

buted to the gentlemen of the Embassy, and were rendered very acceptable by the excessive heat of the day.

Nearly two hours had elapsed before His Excellency re-appeared in the banquetting-room. It was impossible to doubt the cause of his delay: he was arguing the question of prostration. We looked at the screen with unpleasant anticipations, as the Chinese pointed to the carpets, and most significantly acquainted us, that on them we must knock our heads. At length the Ambassador came and informed us of the nature of the ceremony that he intended to go through. It was of the same kind, he observed, as that which he sometimes performed before the empty throne of his own sovereign: he should bow as often as the Mandarins prostrated themselves. He then advanced towards the screen, and was placed, with Sir George Staunton, Mr. Ellis, and Mr. Morrison, immediately before it, having six Mandarins of high rank on his right-hand, and the gentlemen of his suite behind him. At a signal given by an officer, who uttered a few words * in an exalted and singing tone, the Mandarins fell on their knees, and, inclining their heads, knocked them three times against the ground, and then arose. A second and a third time the signal was repeated, and a second and a third time they knelt and knocked their heads thrice against the earth. The Commissioners and the gentlemen of the suite bowed respectfully nine times.

When the ceremony was completed, His Excellency, Sir George Staunton, and Mr. Ellis, were conducted to the tables prepared for them on the right, whilst the principal Mandarins seated themselves at others on the left, assuming to themselves the place of honour. †

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* Mr. Bell, in speaking of the ceremony performed by the Russian Ambassador before the Emperor, at Pekin, states, that "The Master of the Ceremonies stood by and delivered his orders in the Tartar language, by pronouncing the words *morgu* and *boss*: the first meaning to bow, and the other to stand." "Two words," he adds, "I shall never forget."

† De Guignes states, that "the place of honour amongst the Chinese is on the right; amongst the Tartars, on the left;" an observation we had no opportunity of verifying. In every instance of ceremonial observance which we saw in China, the left was the situation of honour.

A crowd of servants immediately entered, bringing trays containing part of the feast, which they placed on the tables. Four courses were served: the first consisting of soup, said to be composed of mares' milk and blood; the second, of sixteen dishes of fruits and dried meats; the third, of eight basins of stewed sharks' fins, birds' nests, harts' sinews, and other viands used by the Chinese for their supposed aphrodisial virtues; and the fourth, of twelve bowls of different kinds of meat cut into small pieces, and floating in gravy. In addition to the usual Chinese table apparatus of chop-sticks and porcelain spoons, we were supplied with four pronged silver forks, curved like a scymetar. The wine, made from rice, was contained in small earthen kettles, from which it was poured into porcelain cups, by servants bending on one knee, and was drunk warm.

During the feast, a play was performed; and, at its close, feats of tumbling were exhibited. The dresses of the performers were very gorgeous, and were said to resemble those worn by the Chinese before the Tartar conquest. Confusion and noise were the only circumstances of the performance which impressed themselves upon me, for I could understand no part of the story. The tumbling was more expressive of strength and agility. After continuing at table about an hour, we rose, and the performance ceased. The back part of the theatre was then thrown open, and disclosed a long passage of painted matting, terminated by a rude drawing of a large dragon.

Having returned to our boats in the same order in which we had left them, we received presents of silk, cotton, and the remains of the feast. Each gentleman was presented with four pieces of coloured silk; and each of the servants, guard and band, with four of coloured cotton. His Excellency, Sir George Staunton, and Mr. Ellis, received separate presents.

At day-light the next morning we left our anchorage, and again proceeded on our route up the Pei-ho. My companions were some way a-head when I discovered that my boat was still at anchor, and on going out to enquire the reason, found that my trackers had absconded and that others had not yet been provided. Whilst waiting

for their arrival, my attention was attracted by several Mandarins sitting along the bank of the river, smoking their pipes. Whethe they were indulging in a morning habit, or whether they were officers who had been superintending the departure of the Embassy, I could not learn. They were of high rank, and received from a number of Chinese who had occasion to pass them numerous and profound salutations. These were always very ludicrous, and often very servile. Where the difference of rank was small, the inferior contented himself with a slight curtsey, and the usual chin-chin, which is performed by clasping the hands, and moving them quickly two or three times up and down before the breast; but where it was great, he made a succession of what might be called running curtseys; moving rapidly towards his superior, he performed as many genuflexions as possible in a given time. These were sometimes so low, that I was surprised how he could keep his legs whilst making them. A great number of peasants were at this time carrying into the city, or depositing on stalls in its vicinity, a great variety of vegetables, and large masses of ice; who, although they passed close to the Mandarins, did not salute them. In China, a salutation from an inferior, to one very much his superior, is considered a mark of impudent familiarity, and subjects the former to the paternal punishment of the bamboo.

The thickness of the ice which I here saw sufficiently testified the severity of the cold which must prevail in these parts during the winter. Two large lumps, about the size of an oyster-barrel, fastened to shallow baskets, and suspended from the end of a bamboo supported across the shoulders of the bearer, were carrying about in all directions. No people understand better, or use more, the refreshing qualities of ice during hot weather, than the Chinese. Every poor fruiterer whom we met with in the environs of towns or cities in the north of China, either vended masses of it at the lowest price, or used it for cooling his articles of sale. Nothing was more common in the precincts of Tien-sing and Tong-Tchow, than to see Chinese sucking fragments of it, or carrying it about in their hands. The steward of the Embassy was supplied with it in profusion, for cooling wine.

The Chinese preserve it in the usual way, by burying it deep in the ground during the summer.

Trackers being at length supplied to my boat, I soon rejoined my companions. We passed, during the day, many of the junks which convey corn to Pekin, answering, in number and magnitude, to the description given of them by the writers of the former Embassy; and having, from the manner and order of their arrangement, a very imposing appearance: they were moored in regular succession along shore, their lofty and highly-ornamented square sterns meeting us as we ascended the river.

Immediately after quitting Tien-sing, the country exhibited much of the same characters of wildness and flatness which they possessed from Ta-koo to that place. The chief difference consisted in an addition to the kinds of cultivated plants. Besides millet and beans, the *Sida tiliæfolia*, one of the hemp plants of the Chinese, the *Sesamum Orientale*, from which they extract an esculent oil, and the *Ricinus communis*, castor-oil plant, continually occurred in patches, or in fields.

Our progress up the river was slow, in consequence of the repeated visits paid by the Mandarins to His Excellency, in order to press his performance of the ceremony of prostration.

On the morning of the 16th of August, at the termination of a conference which the Ambassador had held with the Legate, the boats, instead of advancing, dropped down the stream, and anchored before a village called Tsai-tsun. Lord Amherst informed the gentlemen of his suite, at breakfast, that there was great probability of the immediate return of the Mission, in consequence of his refusal to perform the ceremony. We therefore concluded, that this retrograde movement was preparatory to our going back; but were glad to learn that intelligence had been received of the departure of our ships from the Gulf of Pe-tchee-lee, as the Chinese would consequently be obliged to conduct us through the country to Canton.

During the delay of the boats, I visited the shore, and penetrated into the country to some distance beyond the banks of the river in search of plants, but was not well rewarded for my trouble. The

Polyganum lapathifolium, and *aviculare*, two species of *Chenopodium*, the *Tribulus cistoides*, *Statice limonium*, and *Hibiscus trionum*, were the only uncultivated plants which I met with. In my walk, I was taught not to trust to the appearance of cultivation on the banks of a river as an indication of the general fertility of a country. In the immediate vicinity of Tsai-tsun, the *Holcus Sorghum*, the Kow Leang, or tall corn of the Chinese, clothed the margin of the river. Its high and thickly planted stems had prevented our seeing the country beyond them whilst we remained in the boats, and had led us to suppose that it was generally well cultivated. I now found it to consist of a sterile marsh, extending to an undefinable distance. The soil collected from the river, and sometimes deposited by its overflow, frequently rendered its immediate precincts productive, whilst all beyond was untouched by the hand of the cultivator. At this early period, I was enabled to observe, that much as the Chinese may excel in obtaining abundant products from land naturally fertile, they are much behind other nations in the art of improving that which is naturally barren.

On my return, I passed through the village, and was presently surrounded by its male inhabitants. Dirt, squalidness, and extreme poverty, were as usual their leading characteristics. Their habitations were miserable beyond any thing which England can exemplify. Built of mud, and divided into unfurnished rooms, ventilated by several apertures, they looked more like the dens of beasts than the habitations of men. The state of these huts, and the want of clothing, may produce little human suffering during the summer; but as the winter of this part of China is long and severe, its inhabitants must, without better provision against cold, endure great misery. In the midst of so much poverty, I was astonished at meeting with three women not only decently, but handsomely clothed, whom I surprised in turning suddenly the corner of a house. They were standing in an angle formed by the projection of two walls, and could not well escape me; indeed they showed little inclination to do so, but appeared much pleased with an opportunity of examining one of the

horse-faced men. * These women were of low stature, had faces longer in proportion than those of the men, but so covered with a flesh-coloured paste, that I could not distinguish the tint of their complexions. There was a general air of languor about them, which was especially marked by the drooping of their upper eyelids, the interval between which and the lower ones was so narrow, as scarcely to appear sufficient for the purposes of distinct vision. Their internal angles were more deflexed and lengthened than in the eyes of the men. Their hair was black, and neatly rolled up on the crown of the head, and ornamented with flowers. Their dress consisted of a loose blue cotton robe with long sleeves, and a pair of loose trowsers of the same material, but of a pinkish colour. The robe was fastened before by several buttons from the chin downwards, and fell below the calf of the leg. Its sleeves covered the hands. The trowsers were fastened about the ancle, and almost covered with their folds the small and tight shoe which peeped from beneath them. I had contemplated these curious objects for some time, when our mutual admiration was broken in upon by the appearance of some soldiers, who caused the fair ones to hobble off as fast as their crippled and stunted feet could carry them.

No manners could be more simple and obliging than those of the villagers, when they were satisfied that there was nothing mischievous in my disposition; for, in their first deportment towards me, they evinced the same sort of feeling which is sometimes experienced in approaching an animal whose temper is unknown. This was strikingly displayed by the children, who, observing me much employed in collecting plants, immediately began to gather them. They then approached with caution, step by step, holding their offerings at arms' length, and running off the instant I attempted to take them. When, however, I had once received any part of them,

* By this appellation we were frequently known in China, in consequence of our comparatively long faces and large noses.

all restraint ceased, and I was presently laden with bundles of flowers, which although of no great variety, I could seldom refuse; as, in doing so, I occasioned very evident chagrin to my young friends.

On the morning of the 17th, the Ambassador having had another conference with the Legate, the boats quitted their anchorage, and again proceeded with their heads towards Pekin. In the evening, I walked along the banks of the river, accompanied by Mr. Amherst and Mr. Poole, till we were very disagreeably pressed by a crowd of Chinese who collected about us. We then stopped before the boat of a Mandarin, and being invited in, went on board. This gentleman, a Colonel in the Chinese army, was sitting, when we first saw him, on the bow of his boat, naked to his waist, reclining on a chair with a sloping back, and smoking his pipe. He quitted both on our entrance, and immediately clothed himself. We were hospitably entertained, and treated with fruits and wine. The wine was heated in a small kettle over a basin of boiling water, and drunk from small porcelain cups, not much larger than a thimble.

Having remained as long as we wished, I proposed rejoining our companions; but on rising, we were rudely, the Chinese would say politely, replaced on our seats, and now found that our boats were not in sight. The vessel in which we were, had moved from the shore without our knowledge, and was now very far ahead of the barges of the Embassy. It was eight o'clock, and very dark. I began to fear that His Excellency would be alarmed at the absence of his son; but in vain endeavoured to impress the same apprehension on the mind of the Mandarin: he insisted that we should remain, and ordered his servants more than once to lead me back to the cabin, which I had left to ascertain if the lamps of the Ambassador's barge were visible. It was ten o'clock before we again anchored, and twelve before the boats of the Embassy arrived, which had been delayed by the grounding of several, in consequence of the shallowness of the river. As soon as the Mandarin was informed of their near approach, he ordered his servants, dressed in their costume of ceremony, to conduct us to the Ambassador's yacht; on reaching

which, I was glad to find that no alarm had been excited, as we had been seen to enter the Chinese boat.

On the following day, we arrived within fifteen miles of Tung-Chow. The face of the country varied much during the last few miles of our progress, the banks of the river becoming higher, more sandy, and less fertile. The millet disappeared, and no cultivation was to be seen but in the distance. In the back ground, on both sides, small houses, surrounded by trees, were frequently distinguished, and were more numerous in proportion to our advance. No village was near the place of anchorage for the night, but a great number of Chinese formed a kind of encampment about us, having a variety of provisions for sale. These consisted chiefly of small round flat cakes, hard-boiled eggs, walnuts, areca-nuts, and tobacco. The venders of these articles carried them about on small wooden stands, suspended from the ends of bamboo, which they bore across their shoulders. Our boatmen, who bought nothing that was not repeatedly weighed, gave us no very high opinion of the honesty of their countrymen. Different kinds of refreshment were also to be obtained in a large booth erected within a few yards of our boats. This was formed of matting, and divided into two unequal partitions: the larger served as a room of general accommodation, and was fitted up with tables and benches; the smaller was used as a kitchen. Our trackers occupied this building, partaking largely of their favourite Sam-tchoo and hot millet cakes. The *tout ensemble* had so much the appearance of a resort of gypsies, that I did not look for much cleanliness in its culinary arrangements; but on visiting the interior of the kitchen, found the different utensils for cooking arranged with great neatness and order. The cook, a plump and sleek old man, naked to the waist, seemed from his complexion to have passed all his life within the influence of a furnace. He had supplied himself with an ample store of charcoal, with which he kept up fires in small stoves of baked brick placed on a table before him. Over these were set large iron bowls, in which he baked, and preserved hot, cakes formed of flour, sugar, and the oil of Sesamum: these materials were kept

ready mixed by his side. He was much pleased by my visit; showed me all the secrets of his art, and begged me to partake of its produce; but this was too much impregnated with the oil of Sesamum to be at all agreeable to my palate. This favourite ingredient in Chinese dishes, is expressed from the baked seed of the plant, and has a highly empyreumatic flavour.

Leaving this place, I passed, on the way to my boat, the tents of our Chinese soldiers, arranged along the shore, and forming a scene of much interest. Each was lighted by a blood-red lamp suspended from three sticks set up in a triangle in front of its opening. Groups of soldiers were sitting around them, either smoking their pipes or playing at dominos. I placed myself in the midst of one of them, and at once drew their attention towards me. They examined every part of my dress, and seemed especially struck by the fineness of my linen, and the apparent richness of my gilt buttons. Not satisfied with a superficial examination, they pressed me to take off my coat and other parts of my dress, and did not appear altogether contented at my non-compliance with their wishes. They were less fastidious on their part; not only removing any part of their clothes which they thought me desirous to examine, but urging me to keep it; and would not be satisfied until I had accepted a white linen badge inscribed with large Chinese characters, which was worn by each soldier about his neck. The largeness and length of my hands also occasioned them some surprise and amusement: theirs, like those of all the Chinese, when compared with the hands of Europeans, are very small. When placed in mine, (which are not excessively large,) wrist against wrist, the ends of their fore-fingers scarcely extended beyond the first joints of mine.

At an early hour on the following morning, we were again in progress towards Pekin, and reached Tung-Chow, twelve miles from Pekin, at four o'clock in the afternoon. Crowds of people on the shore, and in boats, assembled to witness our approach, exhibiting the same general characters as those whom we had seen at Tien-sing: but a greater number of them bore the marks of extreme poverty.

CHAPTER IV.

The quarters prepared for the British Embassy at Tung-Chow were scarcely capacious enough for the accommodation of its principal members, consisting chiefly of a small suite of apartments, composing a long building of one story, having a colonnade before it, and situated at one end of an enclosed yard, which was entered by a gate at its other extremity. These were occupied by the Ambassador and one or two of the principal members of the Mission: the others preferred sleeping in their boats, but assembled at meals in the Ambassador's house.

Report having informed the unofficial part of the Mission, that at Tung-Chow the question respecting prostration was to be finally determined, they looked anxiously for events which should speedily decide their fate. On the afternoon of the 21st, the arrival of Imperial Commissioners of very high rank was announced by some Mandarins who waited on His Excellency. We were at dinner when the coming of these persons was made known, but the Ambassador immediately prepared to receive them. The guard was turned out, and the band ordered to play on their entrance. Sir George Staunton, Mr. Ellis, and Mr. Hayne, waited for them at the gate of the court-yard, while His Excellency remained a few steps in advance of the door of his apartment. They did not keep us long in expectation. Six Mandarins, all of whom wore either the clear or opaque blue button, and three of them peacocks' feathers, soon entered, with an air of haughtiness that it is impossible to describe. They pushed rudely past the gentlemen at the gate, without returning their salutation; scarcely noticed His Lordship, and hastening into his apartment, took the seats of honour before he entered. Such a prelude to a conference predicted the shortness of its continuance. It did

not last ten minutes; and at its termination, the Mandarins were dismissed with every mark of contempt. The band was silenced; and the guard, which had been drawn out, was ordered to withhold the intended salute on their return. The despicable presumption of these men gave a foretaste of the treatment that His British Majesty's Representative afterwards experienced from their superiors.

The Imperial Commissioners proved to be very exalted personages: their names Ho* and Muh. Ho was brother-in-law to the Emperor, had distinguished himself by his personal bravery in a late rebellion which had shaken the Chinese throne, was now one of the chief ministers of state, and might be considered in rank equal to a Duke, by which title he was usually distinguished in the Embassy. Muh was the President † of the Le-poo, or Tribunal of Rites and Ceremonies. They differed from each other in age, person, and manners, but were both Tartars. Ho, in appearance between thirty and forty years of age, was in stature about the middle height, of a robust form, and dark ruddy complexion. In his deportment he was strikingly frank, but impetuous and overbearing. Muh, on the contrary, venerable in years and in person, was gentle in manner, and chiefly remarkable for unyielding taciturnity. These men had come to instruct the Ambassador in the correct mode of performing the Tartar ceremony, not only in the presence of the Emperor, but before every piece of yellow rag which they might choose to consider as emblematical of the presence of His Chinese Majesty. The Duke seemed disposed to carry his point by a violent and threatening manner; the

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* Ho's name at full length, according to Mr. Morrison, was Ho-she-tae; which translated is "Ho great in his generation." He held several important situations, the principal of which was the Presidency of the Board of Foreign Affairs.

† Mr. Morrison has observed, that in China there are only seven persons who hold the office of Shang-Shoo, or Presidents Three of these were now with the Embassy: Ho, le-far-yuen shang-shoo, President of the Board for Foreign Affairs; Muh, le-poo shang-shoo, President of the Board of Rites; and Soo, (who had met the Ambassador at Tien-sing,) kung-poo shang-shoo, President of the Board of Public Works.

President had been too often drilled into the habits of passive obedience, to support his colleague otherwise than by silent acquiescence.

The morning following the impudent visit of their envoys, His Excellency, accompanied by the other Commissioners and his suite, visited them both at a small public building in the middle of the city of Tung-Chow, at the distance of rather more than a mile from his residence. The Commissioners went in sedan-chairs; the suite in carts. The sedans were not uncomfortable conveyances; but the carts fully merited the character given of them by different European writers, who have experienced the effects of their motion; being in fact the most execrable machines imaginable. They were made of very strong materials, firmly fastened together. The wheels, frequently without spokes, were low, and fixed to very short axletrees. The bodies, covered with tilts of matting, open only in front, were just wide enough to admit two persons wedged close together; had no raised seats, and were in contact with the axles. Such a construction, in no way lessening the force of the shocks to which they are perpetually liable from the nature of Chinese roads, although of little consequence to the Chinese, who through habit readily accommodate themselves to their motion, was to us a serious evil. The only method used to render these vehicles at all tolerable, is in moving the wheels so far back as to throw the weight between them and the horse; but of this contrivance we had no opportunity of experiencing the comfort. Yet, however inconvenient, they were well defended from the weather by coverings of mats; and a screen, extending from the top, defended the mules which drew them.

The road through which we passed, on our way to the place of audience, was cut into deep and unequal ruts, filled with fluid mud, which threw off, when agitated by the passage of the carts, an offensive exhalation nearly equalling that of the fish-market of St. Sebastian. We were obliged to bear it, being unable to cover our nostrils with our hands, which were employed in supporting us against the concussions that our machines every instant received. We were indeed

so bruised, as to feel no desire for a repetition of the same discipline. Little did we expect what was awaiting us in our Yuen-Ming-Yuen expedition.

The Duke received the Commissioners and Mr. Morrison in a small hall, in front of which was a court-yard. As usual, no accommodation was provided for the other members, who were permitted to take their choice between a drenching in a heavy rain, and suffocation in a crowded room of ill-savoured and importunate Chinese. Fortunately for us, the audience soon terminated. The Duke had insisted on the performance of the ceremony of prostration, and the Ambassador had peremptorily refused to comply with it. The Duke had threatened to send him from the empire without seeing the celestial face of the Emperor, and His Excellency had declared his readiness to depart. The latter, however, put into the hands of the former a letter addressed to His Chinese Majesty, containing his reasons for declining to perform the ceremony. This letter was readily received by the Duke, who appeared glad of a plea for moderating the high tone he had assumed. On this letter now seemed to depend our only chance of visiting Pekin. During the conference, the voice of the Duke was heard very high and decisive in all parts of the court-yard.

We returned from the hall of audience in the same manner as we went to it, again undergoing the cart exercise, but were unable to observe much order in starting. The Chinese muleteers hurried us into the vehicles; and as soon as they saw their respective passengers fairly seated, carried them off without waiting for their companions. On this, and on every other occasion in which the British Embassy appeared in public, the Chinese seemed to imagine, that the only persons necessary to accommodate or oblige, were the heads of the Mission. When they were induced to attend to the convenience of its other members, they were generally influenced either by fear or interest.

In returning to the Ambassador's house, we were obliged to content ourselves with a mere passing glance at the city and its inhabitants.

Shut up in our tomb-like vehicles, we could see little that was not straight before us, but that little in a good measure satisfied our curiosity. The interior of the city, of all the places which I ever beheld, was the most filthy. The rain, which fell in torrents on the morning of our visit, had perhaps rendered it more so than usual; but heaps of dirt, which every where strewed its streets, marked their usual uncleanliness. In one lane the horses were knee-deep in mud, and the bottoms of the Commissioners' chairs touched its surface. The smells which arose from these sources were sufficiently noisome in themselves, but received an increase of offensiveness from the peculiar odours which were thrown off by numerous cook-shops that lined our road, aided perhaps by the dead animals, too closely resembling cats and dogs, which hung in their front.

Tung-Chow is similar in the general arrangement of its streets to Tien-sing; but in the cleanliness of the houses, and the appearance of its inhabitants, is much inferior to it. To Captain Cooke, who was on horseback, and had better opportunities of observation than those who travelled in carts, I am indebted for the following remarks on its walls and gates. "To reach the outer wall we passed over a bridge thrown across a ditch of sufficient width and depth, if kept clear, to form a considerable obstacle to besiegers. The wall appeared to be from sixty to seventy feet high, and judging from the length of its arched gateway, fifty feet thick. When beyond this, we passed another at right angles to it, in a second wall of about thirty feet in thickness. The gates were of wood, seven or eight inches thick. There were numberless embrasures in the walls and gateways for arrows or musquetry: I saw no great guns."

For two or three days after our visit, communications took place between His Excellency and the Duke, the result of which was only known to the diplomatic part of the Embassy. But the movements of the Chinese soldiers, and the report of a person in the Embassy being obnoxious to the Chinese government, kept us in a state of uneasy feeling. The guards round our quarters were doubled, and a

caution published that the Chinese should avoid conversation with the strangers. These measures were adopted by the Chinese in the hope of influencing His Lordship's decision, respecting the performance of the ceremony of prostration, in their favour. It is almost needless to remark, that they were ineffectual.

On the morning of the 27th, His Excellency sent a note to the Duke, definitively declaring his intention not to perform the ceremony; and requesting that the necessary arrangements might be made for his departure. We therefore looked for our immediate return; and it was with equal surprise and satisfaction that we witnessed a visit from the Duke to the Ambassador in the afternoon of the same day, to acquaint him with the Emperor's intention to wave the ceremony of prostration, and to receive him on his own terms, at the palace of Yuen-Ming-Yuen. The Duke was now all smiles and graces, and seemed as urgent for our instant departure for the Imperial Presence, as he had before been to keep us from it. Orders were immediately given for landing the presents and baggage, and the next day was named for our journey.

So much expedition was used by the Chinese, in providing the necessary means of transport, that by three o'clock in the afternoon of the 27th, every article had been put into waggons, or on machines to be carried by hand. An elegant barouche was at the same time unpacked for the conveyance of the Ambassador, his son, Sir George Staunton, and Mr. Ellis. To draw this, four mules were provided, but so small, that they were almost lost in the splendid harness brought from England for their equipment; the collars especially being so large, as to require considerable ingenuity to fit them to their necks. Four sedans were directed to follow, to be in readiness in case of accident, a circumstance not unlikely to occur, as coach, mules, and roads, were unadapted to each other. The whole equipage, however, exhibited a good appearance, and excited great astonishment in a crowd of Chinese who assembled to see it.

Carts and saddle-horses were provided for the conveyance of the gentlemen of the suite, and waggons for the servants, band and guard.

The carts, drawn each by one mule, resembled those which I have already described. The horses were miserable looking animals, both in themselves and in their caparisons. That on which I rode was about thirteen hands and a half high, of a bay colour, having all his bony points extremely prominent. Accustomed to follow *en train*, and of an obstinate temper, he would seldom pass any of his kind; and always chose his own pace, which was something between a trot and an amble. His equipment perfectly harmonised with his personal properties. Two pieces of board forming the saddle, met at so acute an angle, that his bare spine would have afforded a more pleasant support. Behind and before it had two high projections, on the former of which I occasionally sat, to relieve myself from the effects of its central portion. A piece of scarlet cloth was indeed thrown over; but as this was continually slipping, it rather increased than remedied the inconvenience arising from the bare boards. A piece of old cord formed the girt, and permitted the saddle to turn, when I endeavoured to mount. The stirrups were suspended by strings, so short, that they scarcely hung beneath the animal's body, occasioning some danger of collision between my knees and nose. The bridle was of no better materials, and had a bit which the animal totally disregarded. A piece of cord attached to the reins served as a whip. Such an outfit would not have excited dissatisfaction, had it been similar to that of equestrians of respectability in the country; but I did not witness an instance of the poorest Chinese being more miserably mounted. Remonstrance was in vain; the mandarins insisted that no better means of conveyance were to be obtained, and many of the gentlemen preferred any other mode of travelling to that of the carts.

One of the servants and one of the guard being too ill to travel without the means of more convenient transport, application was made to the Chinese for litters. Two were brought, but of a description that it was impossible to use. They were nothing more than two straw or wicker baskets, three feet and a half long and two broad, having the half of their bottoms out, and the remainder so rotten,

that there was every probability of its giving way. In these machines the Chinese proposed to place the invalids, unsheltered from the weather. On their being pointed out to His Excellency, he declared that he would not quit Tung-Chow till others of a better description were provided. Several of our Chinese attendants immediately pretended to seek them; but in their peculiar spirit returned with a cart, appointed to convey one of the gentlemen, but of which they had taken possession during his absence. Lord Amherst now directed that two of the sedans intended to follow his carriage, should be given up to the sick, and thus secured to them more easy vehicles than any which the Chinese seemed disposed to afford.

Every thing being at length ready, our journey commenced at four o'clock in the afternoon. The gentlemen on horseback went in advance of the carriage, the sedan chairs followed immediately behind it, then the carts, next the servants, band and guard in waggons, whilst the rear was closed by our baggage. Every point of the procession was surrounded by mandarins and soldiers in chairs and carts, on horseback and on foot: the whole moved at a foot-pace. We soon reached the gates of Tung-Chow, through which we expected to pass; but the ways proving too narrow for His Lordship's carriage, we took a road under its walls. These are of an oblong square, as stated by Du Halde, and are built of an ill-burnt brick of a blue colour. No masonry could be less expressive of strength, or in a state of greater dilapidation. Leaving the city, we soon reached a handsome bridge of one arch, built of a granular limestone, and ornamented with figures of lions. Having left this, we came to the paved road which extends from Tung-Chow to Pekin. The pavement consisted of large blocks of granite, so irregularly laid, that large chasms from long wear had intervened between them sufficiently deep for the overturn of carriages. These continually occurred through its whole extent, and occasioned the greatest annoyance to those who travelled in carts. That part of the country through which we passed whilst day-light continued, was on each side

of the road well cultivated with millet; but exhibited no scenery with any claim to description.

We travelled so slow, that night came on before we had advanced five miles. My horse I very soon abandoned; and having with no unintelligible marks of contempt yielded him up to a soldier, endeavoured to prosecute my journey on foot, and was instantly surrounded by a crowd of Chinese soldiers and porters, who accompanied us, and peasants who had assembled from the neighbourhood. Their usual importunity was growing exceedingly troublesome, when the coming up of the black drummer of the band suddenly relieved me. This man, of a fine figure, six feet in height, of a jet black complexion, was an object of irresistible curiosity with the Chinese. Wherever he went, crowds followed, and left every other person of the embassy to gaze upon him. To feel his hands, and to compare their colour with that of their own; to endeavour by signs to ascertain from what part of the world he came, was their frequent and eager employment. We always thought ourselves fortunate in our excursions when he had preceded us, and carried off the mob. I continued my walk till after dark, when having suffered two or three severe falls from the holes in the road, I took refuge in the cart of a friend.

About nine o'clock the procession halted at a small village distant five miles from Pekin. The Ambassador was conducted to a building more resembling a shed than a house, and ushered into a large apartment intended for the accommodation of all the persons of the Embassy, and some of their horses. At its further extremity, a long table was spread for the Ambassador and gentlemen of his suite; in the centre, benches and tables were placed for the servants, guard and band; and at a short distance beyond these, horses received their fodder. Our repast consisted of fowls served up whole, but without any instruments to carve them. We were consequently obliged, much to the amusement of the bye-standers, to separate the limbs with our fingers. Water, and spirits in taste and strength like alcohol, were given us to drink. The room was filled by Chinese, who

were present for any purpose, rather than that of attending on the Embassy. In short, a more disagreeable entertainment cannot be imagined. But all fared alike; for in this instance, the Chinese made no distinction in the accommodation of the Ambassador and the lowest of his train. After the delay of about an hour, His Excellency readily yielded to the solicitation of the attendant Mandarins to hasten our departure for Pekin. These gentlemen, of whom Quang and Soo were the principal, urged Lord Amherst to depart, with much anxiety of manner, alleging as an excuse for their importunity, that the Governor of Pekin was waiting his arrival at the gates of the city.

When preparing to leave, I found that the sick had suffered much from the journey, and that their number had been increased by one of the band who had fallen ill on the route. For these, who were all suffering from acute disease, and liable to severe pain from slight motion, application was again made to the Chinese for comfortable litters, but without effect. The only relief that could be afforded to them was in large doses of opium, larger indeed than, under ordinary circumstances, it would have been prudent to administer, but which fortunately diminished their sensibility so much as to enable them to complete the remainder of the journey without severe suffering.

The Ambassador having again taken possession of his carriage, the different persons of his suite went in search of their respective carts, but had the greatest difficulty in finding them. They had been removed from the neighbourhood of the shed in which we had supped, into a sort of stable yard, in its neighbourhood. Not being acquainted with this circumstance, the gentlemen in vain wandered about for some time in the dark, without receiving any assistance in their search from the numerous Chinese who surrounded them, and who only grinned on witnessing their dilemma. Accident at length relieved them from their embarrassment; but few I believe re-possessed themselves of the same carts that had brought them thus far on their journey.

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I was more fortunate than many of my companions. The manner in which I had relinquished my horse on the road induced the Chinese, who always watched minutely the actions of the persons of the Embassy, to replace him at our halting-place by another of a very different character. He was respectable both in condition and equipment, and soon enabled me to overtake the Ambassador, leaving the carts with the other gentlemen far behind. *

Having given my horse to a servant, I mounted the box of the carriage, which was now escorted by men carrying large flambeaux, a precaution necessary to prevent its overturn by the inequalities of the road. The carts were lighted by small paper lanterns of a red colour, which in a long line produced a singular effect. About twelve o'clock we reached the suburbs of the city of Pekin, and found even at this late hour Chinese curiosity fully awake. Thousands of people crowded the road, holding up their small oval lanterns to gain a view of the procession. The light of these was sufficient to discover the faces of the crowd and the style of the buildings by which we were passing. It was a strange scene. The eye, after wandering over numberless naked and illuminated heads, rested on gilded Piazzas stretching in front of the houses, and reflecting the light of the torches.

We were in constant apprehension of driving over the people; but were saved from this misfortune by a band of Chinese soldiers, who flourishing whips on all sides, cleared the way with great dexterity. After proceeding some time, we became anxious to reach the city gates; but were soon mortified, by observing that the carriage was quitting their direction, and that our conductors' tale of the Governor of Pekin waiting our arrival, was only an instance of Chinese falsehood. The carriage being now directed to the

* There can be little doubt from our subsequent experience, that the confusion and difficulties which embarrassed the suite, after the departure of His Lordship, were planned by the Chinese to separate them from each other.

outside of the walls, all the skill of the coachman was required to prevent its overturn. The danger arose from the narrowness of the ways, being only suited to the short axles of the Chinese carts. We first passed through a lane having a high bank on one side and a deep ditch on the other, and when clear of this, entered upon a succession of bridges, overhanging deep ravines, and formed of planks without parapets, and with scarcely sufficient width to admit the wheels of the carriage. Beyond these, we gained a road passing between the walls and a ditch, which seemingly encircled the city. This road being rather good, we were congratulating ourselves upon a termination of our difficulties, when the carriage became fixed in a deep mire. All the efforts of the mules could not for some time move it, although assisted by several Chinese, who put their shoulders to the wheels. Whilst we were thus circumstanced, Mandarins continually went by, without paying any attention to our unpleasant situation. The Commissioners having alighted, the carriage was at length drawn out, and proceeded without further obstacle, till it reached at the dawn of day the celebrated gardens of Yuen-Ming-Yuen.

The morning was fine, and opened to us a scene of novelty and beauty. After travelling, since leaving Ta-koo, through an uninterrupted flat of two hundred miles, remarkable neither for its productions or cultivation, we beheld unusual charms in the hills, trees, and flowers which surrounded us. Fields of *Nelumbo* rearing high its glossy leaves and gorgeous flowers, edged by trees with the foliage of the Cassia, spread at our feet, whilst the Tartar mountains approximated by the haze of the morning rose in the distance. All the descriptions which I had ever read of the paradisiacal delight of Chinese Gardens occurred to my imagination; but in imagination only was I allowed to enjoy them. Acts of fraud, tyranny, and violence speedily effaced the first rising of pleasurable emotion.

Arrived within a short distance of the imperial palace, the Ambassador's carriage was stopped by some Mandarins in their

dresses of ceremony, who from a crowd of others advanced to meet it. Several of these, amongst whom were Soo-ta-jin and our conductor Quang, immediately requested His Excellency to enter the imperial place. His Lordship at first refused, pleading fatigue and illness, and begging to be led to the quarters prepared for him; but after repeated solicitations and assurances that he would only be detained to partake of refreshment, he alighted, and, accompanied by his son, Sir G. Staunton, Mr. Ellis, and a few of the gentlemen of his suite who chanced to be about his person, passed through a multitude of Mandarins to the palace. Repeated attempts appeared now to be made to separate His Lordship from his attendants, by carrying him rapidly forward; obliging them to use considerable exertion to keep up with him, by pressing through a host of opposing Chinese. At length the whole party reached the palace, and were pushed into a room, which, if a fair specimen of other parts, might induce the supposition that His Chinese Majesty was king of the beggars. On entering, it was impossible not to be reminded of Van Braam's exclamation under similar circumstances, *Nous voila donc à notre arrivée dans la célébre residence impériale logis dans une espéce d'écurie. Nous serions nous attendus à une pareille aventure.* This room was perhaps twelve feet in length and seven in breadth, and was surrounded on all sides by windows, or rather openings furnished with shutters in the same manner as the port-holes of a ship. Its roof was a tattered paper sky-light. The shutters were thrown open, to gratify the curiosity of the lower class of Chinese, whilst crowds of Mandarins and Princes of the blood satisfied their's by filling the room almost to suffocation. As soon as His Excellency entered, he threw himself upon a bench, much exhausted by fatigue, watching, and agitation of mind. All followed his example, and pretended to sleep in the hope of avoiding the ceaseless importunity of the Chinese. But they would in no respect suffer our repose. In a few minutes after our arrival, came Soo-ta-jin, stating to the Ambassador the desire of the Emperor to see him and the other Commissioners. Lord Amherst replied, that

fatigue, illness, and the want of the necessary attire, rendered his compliance with the Emperor's desire almost impossible; and requested that His Majesty would allow him that day to recover himself, begging at the same time to be conducted to the dwelling appointed for him. His Lordship's excuses were not received. The Emperor's wish was again and again urged, as not to be rejected; but His Excellency adhered to his former remonstrance. Soo-ta-jin was strongly supported in his solicitations by the legate, Quang. Finding, however, that their entreaties were unavailing, they retired; but were immediately succeeded by the Duke, who entered the room with a determined air, and going up to the Ambassador, repeated the Emperor's desire to see the Commissioners; adding, that they would only be required to perform the English ceremony. On receiving the same answer that had been given to Soo and Quang, he caught His Lordship rudely by the arm, beckoning at the same time to some surrounding Mandarins to assist him. They obeyed the signal, and stepped forward; but before they reached the Ambassador, we started up, and advanced towards him, when in the act of shaking off his unmannerly assailant. This sudden movement stopped the Duke, and alarmed his attendants; the former quitted his hold, and the latter fell back, with countenances full of astonishment. His Lordship, freed from the grasp of the Duke, protested, with great firmness and dignity of manner, against the insult which he had received, and claimed to be treated as the representative of a great and independent Sovereign; declaring, that force alone should carry him into the Imperial presence. The Duke at once altered his tone, endeavouring to make it appear, that what we had considered as an attempt to force the Ambassador from the room, was only the Chinese mode of assisting a person unable to walk; adding, that a sick man had no will of his own; and in the most persuasive manner, entreated His Lordship to wait on the Emperor, who, he said, merely wished to see him on his arrival, and would not detain him. Persuasion, if it could have

availed at first, was now too late. Defeated in his purpose, the Duke left the room in high displeasure.

It was now that His Excellency appealed to us, as witnesses of the violence which he had suffered; and looking to the probability of its recurrence, cautioned those who were armed, against using their weapons in resisting it. Our reflections at this period were not of the most pleasing nature. We could not but be sensible, that we were in the hands of a despotic and capricious government, whose ministers had been repulsed in an attempt to carry a point of the deepest interest to themselves, and who were obviously free from the restraint of courteous feeling. Indignation, however, was our predominant emotion; and was in no small degree increased by the annoyance that we experienced from the number of eunuchs, mandarins, and princes who infested the apartment. Notwithstanding the strongest appeals made by Mr. Morrison to their sense of propriety and civility, they continually pressed upon us; examining our persons with the most unceremonious closeness. They even wished the Ambassador, who was reclined on the bench, to rise, that they might the better view his person. It was plain that they looked upon us as a strange species of animal, whom it was curious to observe, but as beings without the pale of civilised treatment. They also seemed to suspect that we might not be perfectly harmless. Had they again attempted to carry their first intention into effect, they would probably have discovered that Englishmen had not been trained in the habits of non-resistance to tyrannical insult.

Our speculations were soon interrupted by the arrival of a messenger from the Duke; who acquainted His Lordship, that his visit to the Emperor would be dispensed with, and invited him to the Duke's apartments, that he might be free from the pressure of the crowd. His Lordship, looking at this invitation as a mere feint to draw him into the Imperial presence, at once refused it; observing, that if he were well enough to visit the Duke, he could have no reason for refusing to see the Emperor. On receiving this reply,

Ho became again impatient, and again waited on His Excellency. In this visit he was all civility, and used every motive that he could imagine to induce the Ambassador to meet his wishes. His importunity being too suspicious to be complied with, he again left the room without attaining his object; but only to harass His Excellency with message after message, to which he always received the answer, that "the Ambassador wished to be led to the house prepared for him." After some time the messages became less frequent, and then altogether ceased. Mandarins and soldiers, who had been drawn up in the front of the palace, were observed to disperse; and intelligence was soon after brought to the Ambassador, that he was at liberty to go to his own apartments, and that he would be attended by the Emperor's physician.

His Lordship immediately quitted the palace, and endeavoured to reach the carriage, which had remained in the place where we had left it. At first, great difficulty was experienced in getting through the Chinese who surrounded us. Several soldiers, armed with whips, attempted to open a passage; but as they only struck the ground, their efforts were unavailing. We had, however, more effectual aid at hand. The Duke, who had followed us closely, seeing our impediment, seized a whip, and striking furiously all the Chinese who did not fly before him, speedily cleared our path; the nobles of all ranks, in their dresses of ceremony, sprawling over each other in their efforts to escape him. We now soon reached the quarters prepared for the Embassy, in the village of Hai-tcen, and found our companions, who had been purposely separated from us, perplexed at our absence, and overcome with fatigue.

The Ambassador was immediately visited by the promised physician. This gentleman, who appeared to be something beyond the middle age, was dressed as a Mandarin. He felt His Lordship's pulse in both wrists; and having observed that his stomach was probably disordered from the use of a Chinese diet, recommended repose and an emetic, and retired. The report of this person to the Emperor, materially influenced, as it afterwards appeared, our subsequent treatment.

The house intended for the accommodation of the Commissioners was sufficiently comfortable, both in itself and its situation, and had been the residence of Chou-ta-jin, one of the worthy conductors of Lord Macartney's Embassy, who was now on the frontiers of Russia. It consisted of apartments communicating by door-ways covered with rolling screens formed of rattan. Its furniture, exclusive of tables and chairs highly varnished, consisted of large couches covered with embroidered scarlet silk. It stood in an enclosed space of some extent, laid out in a tasteful manner, and ornamented with showy and interesting plants. Suites of rooms for the accommodation of the other members of the Embassy were comprised in detached buildings in its neighbourhood. These had not much to recommend them, being little better than counterparts of our reception-room in the palace. We passed to them through archways and circular openings * in walls surrounding small gardens. In one of these, a large building, open in front, and supported by pillars covered with yellow silk, was prepared for the reception of the presents.

Having partaken of a splendid breakfast, consisting of the choicest Chinese fare, we retired in search of the repose which should enable us to enjoy the inviting scenes in our neighbourhood. We were too much fatigued by the journey of the preceding night, to wait the unlading of our cots, but throwing ourselves on benches or chairs, were soon in a deep sleep. But scarcely had we begun our dreams of all the beauties of Yuen-Ming-Yuen, when we were roused by the noise of preparation. It was the preparation for our instant return to Tung-Chow. The Emperor, incensed at the Ambassador's refusal to visit him, had commanded our immediate departure. Chang brought the order, and was soon followed by a Mandarin, who, in a loud

* It is very common in China to see the apartments of dwelling-houses and temples, and the out-door enclosures, communicating with each other by round door-ways. De Guignes observes, " La porte du bonheur est celle de forme ronde, celle ci a la vertu, suivant les idées Chinoises, d'arrêter les génies malfaisans et de garanter le propriétaire du logis de leur malignes influences."

voice and imperative gesture, called for the principal interpreter. Mr. Morrison appeared. "I am a messenger," said this pompous gentleman, "from the Kei-mun-te-tuh, governor of the nine gates of Pekin, the greatest military officer of the empire; commander of a million of men. He orders the Ambassador instantly to quit the limits of his command."* Such a mandate was not to be entirely disobeyed; we therefore prepared to depart, but not with all the expedition that the Chinese wished. They proposed sending our baggage after us, but could not induce His Excellency to set out till he was satisfied that every article which had been removed from the carts was replaced.

Although now in circumstances the most disgraceful in Chinese estimation, being under the displeasure of the Emperor, we experienced some sympathy in our misfortunes. Yin, the military Mandarin who had accompanied us from the Gulf of Pe-tchee-lee, walked from person to person, condoling with each as well as he could, and attributing our difficulties to the will of heaven. Many of the inferior Chinese attendants had also more of compassion than of triumph in their countenances, and endeavoured by signs to induce us to eat, before we undertook our troublesome journey. And let me not here pass over the humane conduct of a poor Chinese towards myself. He was a young man who belonged to Mr. Morrison's boat, and acting as that gentleman's servant, had been often employed for me in collecting plants, for which he received a small recompense. Seeing me at this time in search of a cart, he led me to the best he could

* This gentleman did not confine himself to the strict purport of his message, but took occasion to give his opinion of the conduct of the Ambassador. "The Ambassador," he said, "has behaved rudely. Your King is respectful and obedient, but your Ambassador is not: he has used disrespectful language. The Emperor will write to the King, and complain of him." On being told that the Ambassador had only begged His Chinese Majesty graciously to defer the audience, he exclaimed, "The ceremonies of the Celestial Empire are unalterable." "This is no time to talk of ceremonies," observed Mr. Morrison. "Nor am I sent for any other purpose than to order your departure," rejoined the other, and went away.

find, recommended me strongly to the care of its driver, and during the journey brought me refreshments, when no exertion of my own could have procured them.

Before leaving Yuen-Ming-Yuen, a request was once more made in behalf of the sick, whom it appeared quite hazardous to subject to the inconveniences of another night-journey, that they might remain behind under the care of their medical attendant till the next day. This application being made to our conductor Chang, he readily answered, that "as they would only have to travel twenty lees, less than seven miles, that night, they had better go with the other persons of the Embassy." This answer is a good illustration of the falsifying disposition of the Chinese. They seldom directly refuse a request which they do not intend to grant, but evade it by a lie which is not immediately palpable. Chang knew that the Embassy were to be hurried as fast as possible to Tung-Chow; but by speaking the truth, he could not have freed himself so easily from our importunity. Another attempt to obtain litters having no better success than that made at Tung-Chow, the invalids were put in possession of the carriage of His Lordship, who determined to return to Tung-Chow in a chair.

As soon as the Ambassador entered his sedan, the different vehicles containing the persons of his train were hurried off at a rapid pace. The pomp of imperial favour no longer attended us. The confusion and haste of a forced journey took place of the slow movement and orderly arrangement of a procession. The crowd of Mandarins and soldiers that had hitherto attended us, disappeared, and were not replaced by a single responsible person.

We reached the city of Pekin at the close of day, stepped from our carts to steal a piece of its walls, had just time to observe that they were built of a sun-dried brick of a blue colour, resting on a foundation of blocks of granite, and were hurried round them to its suburbs. It was dark when we entered them. A numberless mob again surrounded us, thrusting their lanterns, hanging from the ends of short staves, into the carts, to obtain a view of our

faces. As we were not in a humour to indulge their curiosity, many of their lanterns coming in contact with our feet, were sacrificed to our irritability. Beyond the suburbs, we again got upon the paved road, and travelling along it at a fast trot, felt the sensation of continual dislocation and replacement in every joint of our bodies. About twelve o'clock many of the Embassy halted in a heavy rain at the house in which we had received our strange entertainment the night before. Neither shelter nor refreshment being now provided, we took refuge in our carts; and during their delay of an hour, obtained some sleep, and then proceeded on our journey. At four in the morning we reached Tung-Chow, and gladly entered the boats; which, in our present circumstances, had the attraction of homes. The buildings that had been occupied by the Commissioners were closed against us.

The boatmen were much surprised at our sudden return, but received us joyfully and kindly. These men, who, in their ordinary habits of life, often suffer from hunger, and at all times feed on a meagre diet, had fared sumptuously on the redundant supplies of the Embassy. They had also experienced the liberality of individuals, and were for these reasons glad to see their benefactors so soon in a situation to renew their services. They did not, however, fail to speculate amongst themselves on the cause of our sudden appearance, and to express their surprise at our escaping the wholesome correction of the bamboo, for our insolence in opposing the will of their mighty Emperor. Lord Amherst, Sir George Staunton, and the other gentlemen who travelled in chairs, did not arrive till some hours after the carts. The carriage with the sick was obliged to stop all night on the road, near Pekin, in consequence of not being supplied with either guides or torch-bearers. Many casualties had occurred on the journey. Several of the baggage-waggons had been upset, and much of the baggage was injured. But this was a slight grievance. One of His Lordship's servants was nearly killed by the overturning of his cart, through the carelessness of his driver; receiving in the fall a severe concussion of the brain, the effect of which still incapacitates him for his usual avocations.

When we were somewhat recovered from our fatigues, and looked back on the occurrences of the last two days, we seemed rather to have awakened from a dream, than to have experienced any circumstances of real existence. It was impossible to link them together in any probable chain of cause and effect. We could only conjecture that we had been hurried to and from Yuen-Ming-Yuen, and subjected to all kinds of indignity and inconvenience, to suit the will of a capricious despot. It would have been in vain to calculate on the next events. The same will might load us with fresh insults, or again call us to the imperial presence.

Before night, our suspense was in some degree relieved by reports, from authentic sources, that the Emperor had been deceived by his ministers respecting the real cause of the Ambassador's refusal to visit him, and lamented his hasty dismissal. Early the next morning these rumours were confirmed by the arrival of Soo and Quang, with presents from the Emperor to the Prince Regent, consisting of a sceptre cut from a siliceous stone, of a greenish white colour, and called by the Chinese Yu; a necklace of agate, and other beads; and several embossed silk purses. In return for these, they selected from the British presents portraits of the King and Queen, a painting of Doncaster horse-races, several engravings, and some maps of China; manifesting, as an Imperial Edict afterwards expressed it, "the idea of giving much and receiving little!!"

It was about this time verbally communicated to Mr. Morrison, that the Emperor had been kept in ignorance of the circumstance of our having travelled all night, or being without the costume necessary to appear in before him; and that the only plea that had been alleged for the Commissioners' refusal to enter the presence, was the Ambassador's illness; which there was reason to suppose the Chinese physician had declared to be feigned. It was also stated, that all the Chinese officers who had been connected with the Embassy, were degraded. It was, in fact, afterwards ascertained, that Soo had been condemned to lose his situation of President to the Board of Works, together with his peacock's feather, and to be

reduced to a button of the third order; Ho to relinquish his title of Kung-Yay or Duke, to be mulcted in a heavy penalty, and to lose his privilege of wearing a yellow riding-jacket: Muh to lose his Presidency; and Quang his situation of Salt Commissioner. After the interchange of presents, no doubt remained that our early departure was decided on.

Having now given an account of the most interesting public transactions of the Embassy, as far as they fell under my own observation, up to the period of its leaving Tung-Chow, I shall conclude this chapter with a few remarks on the environs of this place, and their inhabitants.

It has been remarked, by the author of an Essay entitled, "Idée générale de la Chine," that it might be concluded, from the relations of travellers who have only visited the sea-ports of China, that in this country, as in Lacedæmon, theft was permitted, if successfully practised. If giving false weight, charging centuple prices, and substituting bad articles for good, form a species of theft, it is not confined to the sea-coast, but is practised all over the empire of China, and is not only tolerated but applauded, especially when foreigners are its victims.* It was constantly practised upon us in the most barefaced manner at Tung-Chow, and indeed every where else in

* I might readily show, that in this statement I only accord with the generality of writers who have had occasion to consider the general character of the Chinese. They are too numerous to be all quoted; but the opinions of Le Comte and Du Halde, two writers best able to appreciate them, I cannot avoid giving: — "Leur qualité essentielle c'est de tromper quand ils peuvent. Ils falsifient presque tout ce qu'ils vendent. Il est sur qu'un étranger sera toujours trompé, s'il achete par lui-même, quelque précaution qu'il prenne." — Nouveaux Mémoires sur la Chine, par Louis Le Comte, tom. i. p. 362.

"Quoique généralement parlant, ils ne soient pas aussi fourbes et aussi trompeurs que le P. le Comte les dépeint, il est néamoins vrai que la bonne foi n'est pas leur vertu favorite, sur tout lorsqu'ils ont à traiter avec les étrangers; ils ne manquent guères de les tromper s'ils le peuvent, et ils s'en font un mérite; il y en a même qui étant surpris en faute sont assez impudens pour s'excuser sur leur peu d'habilité.

"Cette adresse à tromper se remarque principalement parmi les gens du peuple, qui ont recours à mille ruses pour falsifier tout ce qu'ils vendent; il y en a qui ont le secret d'ouvrir l'estomac d'un chapon, et d'en tirer toute la chair, de remplir ensuite le vuide, et de fermer l'ouverture si adroitement, qu'on ne s'en apperçoit que dans le temps que l'on veut le manger."— From p. 77. tom. ii. par le P. du Halde.

China. A kind of balance is used by the Chinese in weighing that enables them readily to deceive the unsuspicious; and gave us many opportunities of witnessing their frauds. It is formed of a long rod or beam, of wood or ivory, with a scale at one end and a moveable weight at the other. The rod is intended to be suspended in equilibrium by a piece of string passing through it. The Chinese, by having two strings at some distance from each other, can alter at pleasure the length of the lever, proportionably increasing or diminishing the weight. Of this construction they never failed to take advantage, at our expense, whenever an opportunity presented itself. I ought, however, to observe, that the soldiers, who accompanied us in our excursions, would have obliged them to act thus, if they had not been prompted by their own disposition. These harpies followed us in all our rambles, and, entering the shops, desired the tradesmen to overcharge us; and when a bargain was completed, received the whole of the extra profit.

Nothing could better illustrate the contemptible and pusillanimous policy of the Chinese towards the Embassy, than the jealous manner in which they watched our visits to some stalls on which arms were exposed for sale. They had so great an objection to our purchasing any weapon of the country, as to seize a sword, bought by a gentleman, at the moment when he was carrying it openly into the Ambassador's quarters.

European silver coins were much sought after at Tung-Chow, but less for their intrinsic value than as curiosities. English eighteen-penny and three-shilling pieces were particularly in request, and seemed to be as highly prized as the Spanish dollar. Indeed, so far did the inhabitants carry their anxiety to possess a coin with a perfect device, as to offer me handful after handful of their small copper money, called Tchen *, for a few silver Java coin with

* This coin, the only figured money in China, is of a round form, has a square hole in the centre for the convenience of stringing, and has the name of the Emperor in Chinese on the face, and two Tartar words on the reverse. This coin is melted, not struck.—Vide Mem. concern. les Chinois, tom. iv. p. 307.

the figure of a horse on one side. The same coin was valued by their money-changers at seven Tchen. This estimation of the value of small silver pieces could only be the consequence of their rarity, as all silver passes with the Chinese by weight. The smallest portion of a dollar goes for its relative worth, as readily as the whole coin. Silver, for a medium of circulation in China, is melted into conical masses, having the form of the crucible in which they have been formed. For large payments, the entire masses are used; for smaller, bits of these are cut off, and weighed on the spot. For this purpose, a Chinese usually carries about with him a pair of scissars and a small balance, of the nature just described, and very sensible, the rod of which is usually of ivory. * Gold, in China, is purely an article of merchandise.

Whilst the Embassy remained at Tung-Chow, we were not permitted to enter the city, but to visit its suburbs at pleasure. These afforded, however, little that was worth the labour of toiling for, under a hot sun, through a crowd of Chinese, being composed of long dirty streets, lined with paltry shops and houses of public entertainment. Much the greater number of the former were filled with the winter dresses of the Chinese. The skins of every species of animal within their reach, from the ermine to the mouse, had been converted into apparel. The most common were deer, dog, goat, and squirrel skins. Rat and mouse skins sewn together, and formed into long cloaks, were also frequent, and had in the eyes of a stranger a very singular effect. Indeed, there was nothing that gave so peculiar a character to the streets, as the fur cloaks with

* Cette sorte de balance est assez semblable à la balance Romaine : elle est composée d'un petit plat, d'un bras d'yvoire ou d'ébenne, et d'un poids courant. Ce bras qui est divisé en de très-petites parties sur trois faces différentes, est suspendu par des fils de soye à l'un des bouts en trois différens points, afin de peser plus aisément toutes sortes de poids. Ces balances sont d'une grande précision. Ils pesent depuis 15 et 20 taels jusqu'à un sol et au-delà, et avec tant de justesse, que la millième partie d'un écu fait pancher la balance d'une manière sensible. — Du Halde, tom. ii. p. 163.

long sleeves hanging up before the doors, and looking like so many decapitated Chinese. Many of these dresses had been handsome; the ermine cloaks having sometimes collars of sable, and linings of silk richly figured. They were all, however, second-hand, and possessed the true Chinese smell. It was impossible to obtain their common prices, as the salesmen, through the influence of our attendant soldiers, always asked of us more than their real value. I gave fourteen Spanish dollars for a deer-skin cloak.

These furs were formerly chiefly brought from Siberia, in caravans. These, according to Mr. Bell *, were allowed by the Emperor's favour to remain in free quarters during their stay at Pekin, and have the liberty to dispose of their goods, and buy others, without the exaction of any impost. The value of one of them was reckoned to amount to four or five hundred thousand roubles, and yielded a return of at least double that sum. The Chinese also obtained a large supply of sables from the Tonguese, who inhabit the southern branch of the river Amoor. † They still derive them from these sources, but also obtain a large supply from North America. ‡

Next in number to the fur-shops, were those of the druggists. These were remarkable for their superior cleanliness; and, in the arrangement of their various drawers and jars, greatly resembled

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* Journey to Pekin, vol. i. p. 326.

† The river Amoor is one of the largest rivers in Asia; it takes its rise in the country of the Mongalls near the river Selinga, and running from thence eastward, it makes the frontier of these parts between Eastern Siberia, and the Oriental Mongalls; and after a course of more than 300 German leagues, it discharges itself into the sea of Japan, in long. 144 degrees. — Bell's Travels.

‡ In the season of 1811 and 1812, the Americans imported into Canton,

Beaver and Land Otter Skins	29,995
Sea Otter	6,403
Seal	35,002
Neuter	142,000
Minx	6,151
Fox	2,532
	222,083

those of Europe. The medicines vended in them appeared to be all from the vegetable kingdom.

The public houses were large open sheds, fitted up with tables and benches, and afforded the means of gambling and drinking to the lower class of the Chinese; and were generally filled with players at dominos or cards, who seemed to enter with intense earnestness into their game. The cards were small pieces of paste-board, about two inches in length and half an inch in width, having black and red characters painted upon them. The beverage most largely partaken of in these houses was tea and wine; but sam-tchoo was also drunk. This liquor, which, from the quantity we met with in China, must be in general use, more resembles alcohol in flavour and strength than any other spirit with which I am acquainted. It sometimes, indeed, has a smoky flavour, resembling that of whiskey. It is distilled from rice or millet, and flavoured, the Chinese said, by the seeds of the bamboo. The wine, according to De Guignes*, is nothing more than water in which rice or millet has been fermented. All the guests in these houses were smoking from pipes of various length, from two to five feet, formed of the young and slender twigs of bamboo, fitted with bowls of white copper, about the size of a thimble.

Having seen so many people on the banks of the Pei-ho exhibiting all the exterior marks of sordid poverty, we felt no surprise that many of them should be driven to mendicity for the means of existence. At Tung-Chow we met with the first of the many proofs which occurred to us in China, that it extensively prevails in that country. Beggars frequented the suburbs, some of whom were miserable objects of deformity, and all exhibited the marks of extreme penury. One man, who occasionally crossed my path, was withered in his thighs and legs, which he writhed about for the purpose of extorting charity. Those who were not prevented by

* Voyage à Peking, tom. ii. p. 278.

disability of body, followed us through the streets and into shops, not quitting us till they were relieved or driven back by the soldiers. On some occasions they prostrated themselves before us, exhibiting vile examples of human degradation, and knocking their heads to the earth, exemplified the nature of the *kotow*.

My observation on the extent of mendicity in China is, I am aware, at variance with the remark of the learned author of "Travels in China," that he "did not observe a single beggar from one extremity of China to the other, except in the streets of Canton." Our opportunities of visiting the cities of China being more frequent than those possessed by that gentleman, may perhaps explain the contrariety of experience; or the opposite characters of Kien-Lung and Kea-king, the emperors who filled the Chinese throne at the respective periods of Lord Macartney's and Lord Amherst's embassies, may have occasioned a very different management of the internal affairs of their empire. Kien-Lung, of an active mind and enlarged policy, making frequent journeys through his empire, examining in his own person the state of his people, or employed in his palace in scrutinizing the reports and actions of his ministers, would be infinitely more competent to prevent the extremes of poverty among his subjects, than Kea-king, the victim of jealous fear, struggling against rebellion*, and unacquainted with the condition of his people, except

* Kea-king, the present Emperor of China, a man of a timid and vacillating temper, sufficiently proved by his conduct to the British Embassy, was almost shaken from his throne by a conspiracy which broke out in his capital, and penetrated to his palace, in the year 1813. It was subdued in a great measure by the personal bravery of his brother-in-law Ho-she-ta, who slew several of the principal ringleaders with his own hand. Seventeen persons were ordered for execution as rebels, at Pekin, in the following year, some to be cut into minute pieces, others beheaded. Thirty-five were by the tribunal sentenced to transportation; but His Majesty changed their sentence to strangling, after a certain period of imprisonment.

The year following the rebellion, an imperial edict was published in Pekin, a translation of which, made at Macao, affords so excellent a specimen of the style of these royal compositions, for they are supposed to be written by the Emperor's own hand, that I have given it, with others of a similar nature, in the Appendix.

through the representation of his favourites, whose falsehood or truth he is from all accounts too weak to estimate.

But whatever be the true explanation, there can, I apprehend, be little doubt that mendicity has been common in China, at various periods, from the earliest ages of the Christian era. In the reign of the Emperor Tay-tsoung, of the dynasty Chong, occupying a part of the fourth century, it was formally reported to the Emperor by one of his counsellors, that "men were found in the country and in cities who could only obtain the means of existence by begging."* From Nieuhoff we learn, that at the time of his visit to China, beggars, "bold and troublesome," "ill-featured and mis-shapen," "covered with sores, mangled, and deformed," frequented the towns and cities of the empire. † Mr. Bell's work ‡ affords similar evidence; and De Guignes, who attended the Dutch Embassy, declares, that in his journey he met with them in towns and cities; and Huttner, according to the same author, affirms that the city of Pekin is filled with them. § Such are the benefits of the boasted patriarchal government of China.

The reader will readily imagine, that my visits to streets displaying no other objects than those which I have just described, were not very frequent. I should have been glad to direct them to the neighbouring country, but it was forbidden ground; whenever I was tempted to penetrate only a short distance beyond the space covered with houses, I was hurried back by the soldiers who attended me. It was not till after we left Tung-Chow that our conductors thought it proper to bring us into good humour, by giving greater latitude to our researches. I therefore restricted myself to forming acquaintances with the occupiers of houses which stretched along that bank of the river by which our boats were anchored. These people being all timber-sellers, with whom I could not deal, had no self-

* Memoires concernant les Chinois, tom. v. p. 163.

† Nieuhoff, Embassy to China, 2d edition, page 163.

‡ Bell's Journey to Pekin, vol. ii. p. 43.

§ De Guignes, Voyage à Peking, tom. iii. p. 135.

interested motive, the main spring of Chinese actions, to abuse my confidence, and proved, in fact, a most civil race. They dwelt in small, neat houses, surrounded by enclosed yards, ornamented in the Chinese taste with gay rather than fragrant plants. The enclosures, whilst they gave the advantages of privacy, were of sufficient extent to admit the freest circulation of air. They opened towards the river by a gate in a fence at right angles with the houses, which looked towards the south. The inmates of these dwellings, whenever they saw us at the entrance-gate, invited us in. We frequently found them at meals in the open air, and were always on these occasions pressed to partake of their fare, and on all others, supplied with tea. They permitted me freely to examine the yards and outer apartments of their houses; but never allowed me to enter those of the interior, which were probably appropriated to their women. Those which I had an opportunity of seeing, formed the front of the house, and consisted of two of unequal size. The larger, of twice the size of the other, served for general purposes; it was an apartment for the reception of company, a temple, and a sleeping room. Its walls were covered with white paper, on which hung some rude sketches of mountain-scenery, and some moral sentences written on silk, in large Chinese characters. The bed places at one end of the room were large massive benches of brick-work, having a small furnace beneath them, by which they are warmed during winter. On these, with no other defence from their hardness than a felt mat, the Chinese sleep. But the most striking piece of furniture, if it may be so called, was a temple in miniature. It much resembled at first sight cases of shell-work, which are sometimes seen in houses in England, and are called grottos. It was seldom more than two or three feet square, and was generally placed against the wall a few feet from the ground, nearly opposite to the entrance-door. In its centre was a figure of an ill-proportioned, corpulent old man, plentifully besmeared with gilding, and red and white paint, and surrounded with strings of round pieces of tinfoil, which the Chinese

burn in their sacrifices. Chairs and tables of varnished wood clumsy in form and materials, completed the furniture of the apartment.

The smaller room was a kitchen, which did not display a very complicated apparatus, having only a square brick furnace supporting two large iron bowls, that served for baking, boiling, or any other similar purpose.

The Chinese appeared to have confined their attempts at ornament to their yards, which contained plants of various species. The elegant *Ipomœa quamoclet*, trained on small frames of trellis work, was, from its frequent culture, obviously a favourite. The *Begonia Evansiana**, *Largerstræmia indica*, *Hemorocallis japonica*, *Punica granatum* dwarfed, *Cassia sophora*, *Nerium oleander*, *Lychnis coronata*, *Tradescantia cristata*, were abundantly cultivated in pots, together with a species of *Dianella*, with purple flowers, of *Hibiscus*, and of *Plumbago*, which I could not determine. But cultivated and prized above all others, appeared the *Nelumbium speciosum*, the *Lien-wha* of the Chinese. This splendid flower, celebrated for its beauty by the Chinese poets, and ranked for its virtues among the plants which, according to Chinese theology, enter into the beverage† of immortality, flourished in the greatest vigour in the gardens of Tung-Chow. It was raised in capacious vases of water, containing gold and silver fish, supported on stands a few feet from the ground. These were surrounded by steps of different elevation, supporting other plants mingled with artificial rocks, representing a hilly country and covered with diminutive houses, pagodas, and gardens. In this situation the Nelumbium was certainly an object of exceeding beauty. Its tulip-like blossoms of many petals tinted with the most delicate pink, hung over its fan-like leaves, floated on the surface of the water, or rising on long footstalks of unequal height, bent them

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* Plantes rares. † Memoires concernant les Chinois, tom. iii 437.

into elegant curves, and shaded with graceful festoons the plants beneath.

The Nelumbium is used by the Chinese to decorate lakes and other ornamental water, and to give a charm and productiveness to marshes otherwise unsightly and barren. Near Yuen-Ming-Yuen, and under the walls of Pekin, I saw it covering with pink and yellow blossoms large tracts of land, and could sympathise with the enthusiasm of the Chinese bards, who have sung of the delight of moonlight excursions on rivers covered with the flowering *Lien-wha.** Its seeds, in size and form like a small acorn without its cup, are eaten green or dried as nuts, and are often preserved as sweetmeats: they have a nut-like flavour. Its roots, sometimes as thick as the arm, of a pale green without and whitish within, in a raw state are eaten as fruit, being juicy and of a sweetish and refreshing flavour; and when boiled, are served as vegetables. Both seeds and roots were frequently sent with the dessert to the Ambassador's table: the former were relished by us, but the latter were too fibrous to be eaten with pleasure. The leaves are said to possess a strengthening quality; the seed vessel to cure the colic, to facilitate parturition, and to counteract the effects of poison.

The Nelumbium is readily raised by the Chinese in all parts of the empire through which we passed, but seemed to flourish better in the northern than the southern provinces; and, according to the Missionaries, grows most luxuriantly beyond the great wall. I was unable to obtain much information respecting its culture, and none that was new. It does not appear that much art is used. Its leaves are watered in the summer, and cut down close to the roots on the approach of winter.

The inhabitants were very liberal in their gifts of cultivated plants, allowing me to select specimens for drying; and whenever I expressed a wish to possess living ones, they readily gave them to me.

* Memoires concernant les Chinois, tom. iii. 437.

Presents in return were always acceptable, and sometimes expected; and of these, black-lead pencils, and common English writing-paper, were much valued.

From the gardens I obtained the greater number of the botanical specimens that I collected in the neighbourhood of Tung-Chow. No country could be more barren in uncultivated plants. The species of *Polyganum*, before-mentioned as growing on the banks of the Pei-ho, were here also common, together with the *Hibiscus trionum*, *Lycium Chinense**, *Tribulus terrestris*†, and a species of *Artemesia*. The *Sophora japonica*‡, growing to a large size, was seen in the gardens, and often by the road-side, and was obviously prized for its beauty.

The plants cultivated for their esculent or other useful properties, were numerous in proportion to those which were wild. As Chinese corn, the *Holcus sorghum*, and a species of *Panicum*, were the most abundant. The former frequently grew to sixteen feet in height. Its large bunchy panicles were ripening fast whilst we remained at Tung-Chow. The seed of this plant is sown in rows on the margin of rivers, in a stiff soil; and when it begins to rise through the ground, the more humble *Panicum*, which ripens after its tall neighbour is cut down, is sown between them. Its seeds are fully developed

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* I have called this plant Chinense because it appears to be the same which has received that specific appellation from botanists; but I was entirely unable to observe any difference, except in the *occasional size* of the leaves, between it and *Lycium barbarum* of Linnæus. It is a most abundant plant on the banks of the rivers in the province of Pe-tchee-lee.

† This plant is equally abundant on the banks of the Pei-ho and Eu-ho, in the province of Pe-tchee lee. The character, "foliola sex-jugata," given to this plant by its describers, does not at all apply to it as found by me in the north of China. Like *T. cistoides*, it has always "foliola octo-jugata," and only differs from that plant in the smallness of its corolla.

‡ Most of the trees which I observed in the precincts of Yuen-Ming-Yuen, had pinnated leaves, and were, I suspect, chiefly the *Sophora japonica*. I may here observe, that in giving some account of the plants which I found in China, I by no means wish it to be understood that I mention all that I either saw or collected. I only name those of which I have some memorandum, which I distinctly recollect, or of which I have recovered specimens.

before the tall corn is reaped, and only requires the solar light and heat, till then excluded, to ripen. The *Polygonum fagopyrum* is also cultivated as grain, but generally occurred in patches in the neighbourhood of cottages. These three plants seemed to afford the principal farinaceous support to the people inhabiting the banks of the Pei-ho. The *Sesamum orientale*, and the *Ricinus communis*, or Castor oil plant, were much cultivated for the esculent oils extracted from their seeds. The Chinese use, I suspect, some means of depriving the oil of this plant of its purgative properties; but that they do not entirely succeed, Chinese habits enabled me to observe, in every field or pathway that I entered between Tien-sing and Tung-Chow. The seeds, which are also eaten, occasion, no doubt, the same effects as the oil extracted from them.

Of the plants cultivated as vegetables, the principal were the *Solanum melongena*, two species of *Capsicum**, the Sweet Potatoe, several species of Gourds and Cucumbers, one or two species of *Phaseolus*, or kidney-bean, of which they boil the young plants, and above all, the vegetable called by the Chinese *Petsai*†, a species of cabbage.

The *Petsai* is quite a national plant. The quantity consumed of it all over the Chinese empire, but in Pekin especially, is immense; the nine gates of this city, according to some authors, being frequently choked by various vehicles laden with it, which pass through them daily from morning till night during the months of October and November. This vegetable may in fact be considered in relation to the Chinese what the potatoe is to the Irish. It is prized by all classes, and esteemed by them as a necessary of life. It is cultivated all over the empire, and receives a greater share of horticultural labour and skill than any other plant. In rearing it, the Chinese consume an enormous quantity of their celebrated

* The *Capsicum Sinense*, and *Capsicum Annuum*, the latter quite as commonly as the former.

† *Pe*, white, *tsai*, vegetable; so named, probably, because the Chinese blanch the plant, naturally green.

manure, called by them Ta Few*, composed chiefly of human ordure.

This plant, which I have eaten as a salad, and found equal to any lettuce, has somewhat the flavour, when boiled, of asparagus. It often weighs from fifteen to twenty pounds, and reaches the height of two or three feet. The Chinese preserve it during the winter by different methods: many pickle it in salt and vinegar; others keep it fresh, either by planting it in large quantities in wet sand, at the bottom of trenches cut for the purpose, or after drying it in the sun, by burying it deep in the earth. Those who wish to preserve it for a short time only, place it two or three feet beneath the surface, covering it with a layer of straw and earth. †

Of the many species of fruit brought to the Ambassador's table at Tung-Chow, I saw very few growing. Indeed, I can only mention a very fine white grape, generally cultivated in the gardens, water and other melons, the *Lien-wha*, and peach. We were, however, amply supplied with apples and chesnuts, an esculent seed of a pine said to come from Tartary, and the seed of the *Taxus nucifera*.

Among the plants raised for other purposes than those yet named, the *Sida tiliæfolia* ‡, the *Xing ma* § of the Chinese, was the most conspicuous. This plant is extensively cultivated on the banks of the Pei-ho, in the neighbourhood of Tung-chow, for the manufacture of cordage formed of its fibre. It is not indeed the universal cordage-

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* Of this manure and its application I shall elsewhere give some account.

† A full account of the manner of rearing and preserving this vegetable is given in Mémoires concernant les Chinois, tom. iv.

‡ Willdenow has described the *Sida tiliæfolia* under the division of the genus "*pedunculis unifloris*," a character not at first sight belonging to it, since the peduncles often divide into several others, each bearing a flower; but each subdivision has a small leaf, which, in a more advanced age of the plant, renders the character strictly applicable.

§ Xing ma. The character *ma* signifies any plant whose seed is esculent, and whose fibre can be made into rope.

plant of the Chinese, but seems to be chiefly confined to the northern provinces. They have another plant also used for the manufacture of rope, called by them *Gĕ ma*, which is, I believe, the *Cannabis sativa*. The cordage made from the *Cannabis* is most prized by Europeans, but that formed from the Sida is, I suspect, preferred by the Chinese. I am led to this conclusion by having observed the two plants cultivated together at Tung-Chow, the Sida in long ridges or in fields, like the millet, and the Cannabis in small patches. I had no opportunity of seeing the manufacture of the Sida; but the rope made from it, in colour, softness, and fineness, resembles the dressed fibre of several West Indian Sidas prepared by Dr. Wright, and placed, with their respective plants, in the herbarium of Sir Joseph Banks. The root of the Sida is used according to the Missionaries*, as a powerful sudorific; but as their information is derived from the Chinese, who attribute medicinal properties to almost all plants, it cannot in this instance be much relied on.

From the number of plants cultivated at Tung-Chow, my readers may be disposed to imagine that every foot of ground was rendered productive. This, however, would be an erroneous conclusion. Variety seemed to have taken place of quantity. It appeared as if the soil was capable of bearing no extensive crop of any one kind, but was of a different quality in different spots, and adapted to the growth of different kinds. Thus, on the borders of the river, I often found millet; and not a hundred yards beyond, the Sida; and, still farther, the Gossipium, and then a barren marsh; but this series had no fixed law except with respect to the millet, which always lined the banks of the river when not of a sandy nature. In this mode of cultivation the Chinese had shown some ingenuity and industry; but I could never find, here or elsewhere, that they throw extensive tracts of land into general cultivation; still less, that

* Lettres Edifiantes et Curieuses, tom. xxi. p. 30.

they modify its surface by any complicated process of a durable result. In short, whatever observations I have been able to make on the state of their land, lead me to the conclusion, that, "as horticulturists, they may perhaps be allowed a considerable share of merit; but, on the great scale of agriculture, they are not to be mentioned with many European nations."

Circumstances have deprived me of the power of giving any detailed account of many insects which I had an opportunity of collecting at Tung-Chow. My memory only permits me to state, generally, that the *Scarabœus molossus*, *Cerambyx farinosus*, frequented the corn-fields; and that the mole cricket *Gryllus gryllotalpha* of a large size, entered the windows of our boats as soon as candles were lighted in the evening, and was occasionally found in our beds.

During our stay at Tung-Chow, much sickness occurred in the Embassy, but its severe forms were confined to the band and guard. The complaints were chiefly dysenteric and inflammatory; the former arising, I apprehend, in a good measure, from the nature of the waters of the Pei-ho; the latter, from the habits of the men and the nature of their situation on board the boats.

The water of the river had, from the time of leaving Ta-koo, given unequivocal proofs of its noxious effects on the digestive organs of every one, but especially of those who were at all prone to their disorders. To its effects in this respect I attribute, in some measure, the death of one of the men of His Lordship's band, whose name was Pybus, and who was remarkable for a mild and grateful disposition. He had been attacked with dysentery on board the Alceste, had been in great danger, but had so far recovered as to join his companions with eagerness on His Lordship's disembarkation. After entering the Pei-ho all his symptoms returned with increased severity, and terminated his existence on the day previous to our departure for Yuen-Ming-Yuen. He was buried with military honours in a Chinese burial ground, which had received the remains of his countryman Eade, one of the followers of Lord Macartney.

The difference of temperature and moisture of the day and night, which was considerable whilst we remained at Tung-Chow, had a direct tendency to induce inflammatory disease; and, aided by imprudence in bathing at mid-day under a hot sun, and too great, though by no means intemperate potation, of the ardent spirits of the Chinese, occasioned two or three severe cases of inflammation of the bowels and lungs in the guard and band. Should any circumstances ever again carry an Embassy to Tung-Chow, it would be better for all its members to sleep, if possible, on shore. The exhalations of the river, charged with all kinds of effluvia produced by the uncleanly habits of a large population living on the water, and the decomposing vegetable and animal matter ejected from the boats, will thus be avoided. Those also who are too ignorant correctly to estimate the effect of any particular habit will be thus within the reach of persons who may be able to control them. No sufficient accommodation having, on our arrival at Tung-Chow, been provided for the whole of His Lordship's guard and band, many of them were obliged to live in their boats, and were in consequence enabled to indulge their propensities to what they considered enjoyment, without fully benefiting from the intelligent regulations of their commanding officer. His Lordship's guard deserve, however, this tribute of praise, that they conducted themselves, from the time of entering the Chinese empire to that of leaving it, with undeviating propriety in every duty connected with their particular situation; and were only untractable in what concerned their own health.

The water of the Pei-ho, when first taken up, is of a milky colour, and holds a considerable quantity of earthy matter in suspension. The Chinese precipitated this, in some degree, by agitating the water with a piece of alum enclosed in the end of a bamboo, but did not deprive it entirely of its noxious properties. Drip stones, under these and similar circumstances, would have been invaluable to us. We often considered a draught of pure water, in the interior of China, as great a luxury as it usually is to those who have been some weeks at sea.

Fahrenheit's thermometer, whilst we remained at Tung-Chow, from the 20th of August to the 2d of September, stood frequently in the shade during the day at 88°, once rose to 93°, and never fell below 83°. In the night it generally sunk to 72° and 70°, giving rise to a sensation of cold quite inexplicable by a reference to the absolute temperature.

CHAPTER V.

On the morning of the 2d of September, the boats of the Embassy having quitted their anchorage before Tung-Chow, we commenced a four months' journey through the Empire of China to Canton. On retracing our way to Tien-sing, we had few motives and little inclination to keep within the bounds prescribed to our rambles by the Chinese, and soon found, in exceeding them, that they quietly acquiesced in what they could not, without some trouble, prevent. But we met with little novelty by extending the range of our investigation. The same description of inhabitants, dwellings, and produce that I had occasion to describe on our route to Tung-Chow, was found equally on the banks of the river and beyond them, when all was not marsh. I added but very few plants to my former meagre collection, and of these I am only able to mention the *Ulmus pumila*, growing in dry barren places; a species of *Orobanche**; and the *Viola tricolor*.

The apprehension of the junior part of the crowds, who as usual assembled about me from the huts or villages in the vicinity of my walks, was in a great degree worn off; but their anxiety to assist me in my pursuits was undiminished. Their elders, especially when they were peasants, afforded a pleasing contrast in their simple manners and civil treatment of strangers, to the cunning designs of the salesmen of Tung-Chow, and the brutal importunity of the courtiers of Yuen-Ming-Yuen. When they have accompanied me along the banks of the river, far in advance of my boat, and have beheld me overcome by fatigue and heat, they have always appeared anxious to relieve my distress. One has hastened to the nearest house for a seat,

* I had no doubt at the time of gathering this plant that it was the *Orobanche cœrulea*, but I have since had no opportunity of verifying the specific name.

another has brought me water, and a third has held an umbrella over my head to defend me from the sun, whilst their companions have at some distance formed a circle around me. We were to these people as the inhabitants of another world. Our features, dress, and habits were so opposed to theirs, as to induce them to infer that our country, in all its natural characters, must equally differ from their own. "Have you a moon, and rain, and rivers in your country?" were their occasional questions. Comprehending no other rational object for the collecting of plants than their useful qualities, and seeing me gather all indiscriminately, they at once supposed that I sought them merely as objects of curiosity, and laughed heartily at my eagerness to obtain them. They pitied my ignorance, and endeavoured to teach me their relative worth, and were anxious for me to learn the important truth, that from one seed many might be obtained. A young man having shaken some ripe seeds from the capsules of the Sesamum and the Sida, described to me, with much minuteness, that if I took them to my own country, and put them into the ground, they would produce many plants, and I might thus in time obtain the blessing of good rope and oil.

We arrived at Tien-sing on the 6th. During the delay of the Embassy for two days at this city, Mr. Griffith and myself obtained permission from our conductor Chang to enter a part of it, from which, during our former visit to this place, we had been excluded. An officer who superintended our boats was appointed to attend us, to guard against the imposition of tradesmen; but he gave us great reason to suspect that he either wished to partake of the profits resulting from our bargains, or to prevent our purchasing altogether, by inducing the people to put an exorbitant price on their goods.*

* The conduct of the Chinese soldiers, in enhancing the price of goods to a stranger, resembles that of the Janissaries in Turkey. Dr. Clarke tells us, that strangers visiting the shops of Constantinople, attended by a Janissary, pays for every article a price augmented in the proportion of the sum "privately exacted by the Janissary as his share of the profit."—Travels in various Countries of Europe, Asia, and Africa. Part the Second, p. 34.

It appeared, indeed, as if the people of Tien-sing, having observed us carrying scarcely any other money about than dollars, supposed them of as little value to us as their copper coin; for they offered no article to our purchase whose price was not given in dollars, although its real value was only a few Tchen. This circumstance was the more provoking, as we met with several specimens of Chinese ingenuity which we were not likely to obtain elsewhere. Those contained in the shops of the lapidaries tempted us the most, and raised our admiration the highest. In these we found a variety of the hardest stones, cut into singular and sometimes rather beautiful forms. The stone called by the Chinese Yu was, in their estimation, the most precious. It has been famed in China from the earliest ages, having, according to the antiquarians of the country, been distinctly described a thousand years before the Christian era.* It is of various colours, passing from white, with the slightest tinge of green, through green of every degree of intensity; and also occurs, according to the Chinese, of a clear blue, sky-blue, an indigo-blue, and of a citron-yellow and orange-yellow colour. But I suspect that they confound several species of stone under the name Yu. Their blue stone may be lapis lazuli, and their yellow, varieties of chalcedony and carnelian, all which I have frequently met with in China.

The Missionaries tell us, and I received precisely the same account of its green varieties, that the Yu is found in the form of nodules in the bottoms of ravines, and in the beds of torrents, in mountainous countries, and in larger masses in the mountains themselves, especially in Yu-nan.† The nodules are more prized by the Chinese than the large masses, which have the coarsest grain. Whatever specimens are found must be subjected to the selection of the Emperor before they are carried to the market. Of the green, the Chinese prize that

* Mémoires concernant les Chinois, vol. vi. p. 258.

† One of the most northern provinces of the empire. According to Du Halde, it is one of the richest and most extensive; containing twenty-one cities of the first order, and fifty-five of the second and of the third. Du Halde, Fol. tom. i. p. 243.

most which is whitest: of this was formed the sceptre sent from the Emperor to His Royal Highness the Prince Regent.

The Yu,* although of the hardness of rock crystal, is worked into an endless variety of forms; into beautifully carved rings, worn on the thumbs of archers to defend them from the friction of the bow-string; into fine chains, cups, and vases. Yet so refractory is this substance to the tools used in its manufacture by the Yu-tsiang, or workers in Yu, who succeed each other in their labours night and day in the imperial palace, that many of the forms into which it is wrought require, according to the Missionaries, ten years for their completion. That much time, infinite patience, and great ingenuity are sometimes expended in working it, I could not doubt, when I held in my hand a small vase which I found in a shop at Tien-sing. It was formed from one entire mass of greenish white Yu.* The handle represented a lizard, with all its characters minutely displayed. Figures of the same animal were sculptured in high relief on its sides, some crawling up, and others overlooking the rim of the vessel. Whatever part of the exterior surface they left unoccupied, was filled with ancient Chinese characters deeply engraved. Its price was one hundred and twenty Spanish dollars; or, according to the value of silver in China, upwards of thirty guineas. The partiality of the Chinese for this stone seemed to me quite unaccountable, from any quality that it exhibited to my observation. It is generally of a dull, sometimes of a muddy colour, and does not admit so high a polish as agate.

The greenish white variety of the Yu has long been known in this country under the name of Chinese Jade or Nephrite, but has lately been classed with Prehnite. † I am disposed, however, to believe that it will be found an undescribed species, but closely allied to axestone. Its analysis, which can alone determine its nature, I have had no

* Of their manner of working this stone I could obtain no information in China; but there can be little doubt that they use largely the powder of the Corundum, or Adamantine Spar, which they employ in Canton in cutting lenses for *spectacles* from rock crystal.

† Jameson's Mineralogy, 2d edition, vol. i. p. 505. note.

opportunity of making; but such of its characters as I have been able to mark, are given in a note at the foot of this page. *

The other stones which I observed in Tien-sing were chiefly agate and pudding-stone, worked into large rings for the wrists, ornaments for the women's hair in shape like a skewer, and snuff-bottles. These last, formed also of amber, porcelain, and imitations of stone, resemble in shape the smelling-bottles of the ladies of England; but have a small spoon, like that of a Cayenne pepper-bottle, fastened to the stopples, for the purpose of taking out the snuff.

The curiosity of the people of Tien-sing seemed to have been in no degree diminished by their first opportunity of seeing the English tribute-bearers, and was manifested, much to our annoyance, in our visit to the city. The crowds who had been so orderly and silent during our procession to partake of the imperial banquet, being now unrestrained by authority, flocked about us, and were not more forbearing than others of their countrymen.

No circumstance arrests the eye of a stranger in the cities of China more than the great number of barbers, who are met with in its streets and form a considerable proportion of every crowd. Why they are so numerous, is readily explained by a reference to the universal custom amongst the Chinese, of shaving all but the crown

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* Its colour is greenish white passing into greyish green, and dark grass-green. Internally, it is scarcely glimmering. Its fracture is splintery: splinters white. It is semi-transparent and cloudy. It scratches glass strongly; and is not scratched by, or scratches, rock-crystal. Before the blow-pipe, it is infusible without addition.

Specific Gravity.

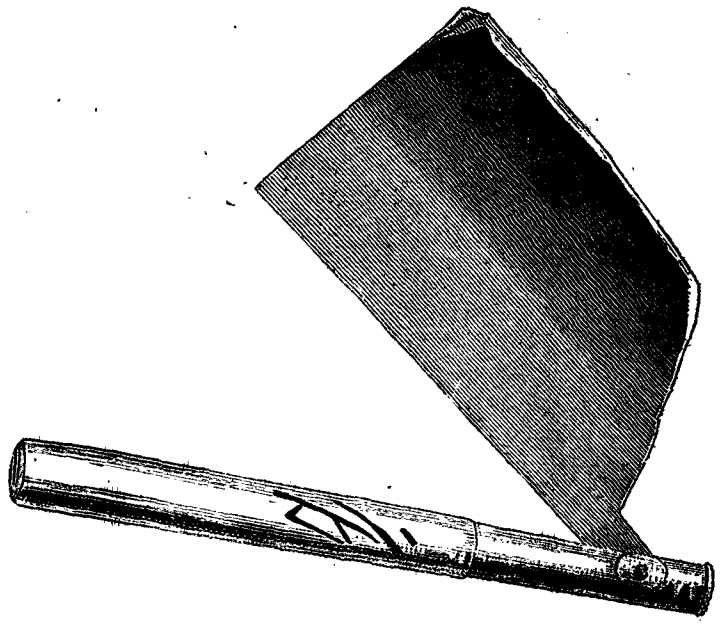
1. Whitish green, marbled with dark-green variety,	3·33
2. Dark-green variety,	3·19
3. Whitish green variety, off the same specimen as No. 1.	3·4
4. Light-coloured greenish-white variety,	2·858

The specimens of which the specific gravities are as above, were all, except the last, furnished to me by the kindness of Sir George Staunton. The last is precisely of the same nature as the sceptre sent to His Royal Highness the Prince Regent, and was put into my possession, for the purpose of examination, by the Honourable Mr. Amherst, to whom it was presented by one of our attendant Mandarins.

of the head, and of eradicating every straggling hair from the face, especially from the ears, eyes, and nostrils; and to their practice of shampooing: a single operation, consequently, occupying so much time, that one man cannot serve many employers in a day. The barbers carry about with them all the necessary implements of their avocation; a stool, a small furnace, water, razors, and brushes, comprised in two small stands, suspended from the two ends of a bamboo, supported across the shoulders. Besides these, they have a variety of small instruments made of white copper, the forms of which tell little of their appropriate uses. My readers may amuse themselves in conjecturing them, from their fac-simile representation in the annexed engraving. I could only observe that they were flourished with great rapidity about the face of the patient. They were probably used in the process of shampooing, of which the following curious account is given by one who underwent it: "Shampooing is an operation not known in Europe, and is peculiar to the Chinese, which I had once the curiosity to go through, and for which I paid but a trifle. However, had I not seen several China merchants shampooed before me, I should have been very apprehensive of danger, even at the sight of all the different instruments that were arranged in proper order on the table before the operator began. He first placed me in a large chair; then began to beat, with both his hands, very fast upon all parts of my body. He next stretched out my arms and legs, and gave them several sudden pulls that racked my joints; then got my arm upon his shoulder, and hauled me sideways a good way over the chair, and as suddenly gave my head a twitch or jerk round, that I thought he should have put my neck out of joint. Next, he beat, with the ends of his fingers, very softly, but very quickly, all over my head, body, and legs, every now and then cracking his fingers with an air; then he stroaked up my ears, temples, and eye-lashes; and again racked my joints. After he had gone through this process, he proceeded with his instruments to scrape, pick, and syringe my ears, every now and then tinkling with an instrument close to my ears. The next thing was my eyes,

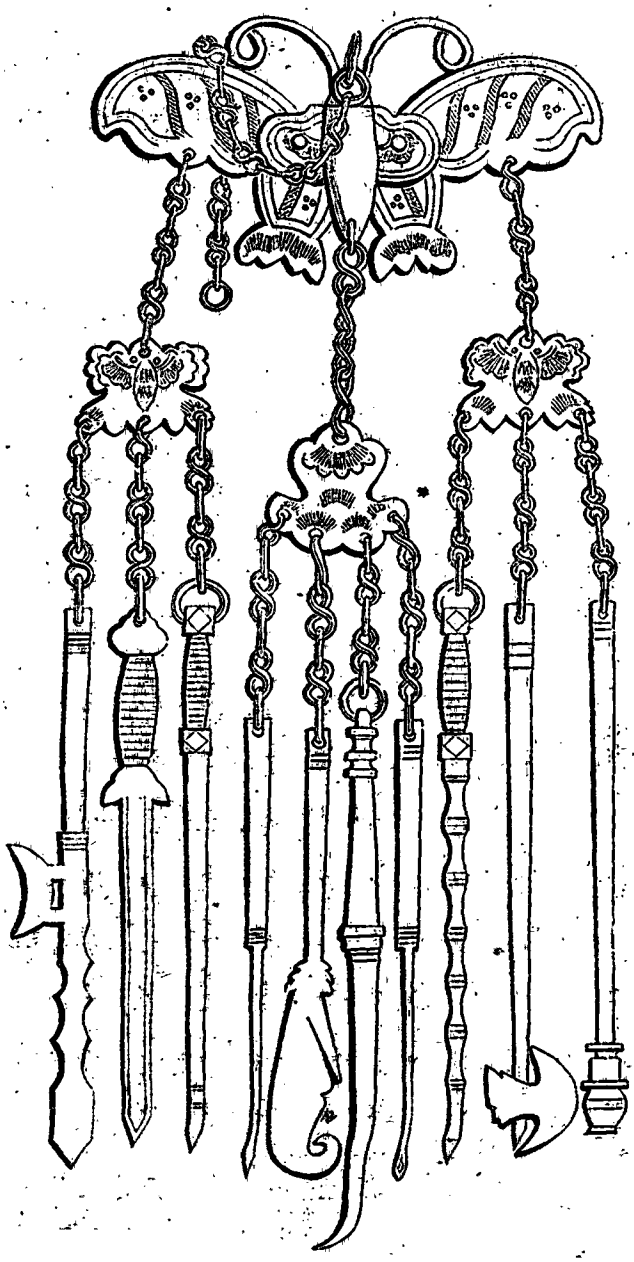
into which I patiently suffered several small instruments to be thrust and turned about, by which operation he brought away half a tea-cup-full of hot, waterish stuff. He next proceeded to scraping, paring, and cleaning the nails of my fingers and toes; and then to cutting my corns. I only wanted to have had a lock of hair plaited, to complete the operation. But after he had spent half an hour with me, it ended here, for which I gave him to the value of a penny. He departed well satisfied, and afterwards called several mornings." *

Their razors looked clumsy and inconvenient; but I can state from experience, that their edge is keen, and that they are used by expert manipulators. At the commencement of an illness that required the shaving of my head, I was induced by curiosity to commit myself to the hands of a Chinese barber; and at a more advanced period of my disorder, put myself for the same purpose under another of the fraternity, after suffering from the inferior skill of one of my countrymen.



BOMBAY BRANCH OF THE ASIATIC SOCIETY

* Voyage to the East Indies. 1762. 8vo. p. 226.



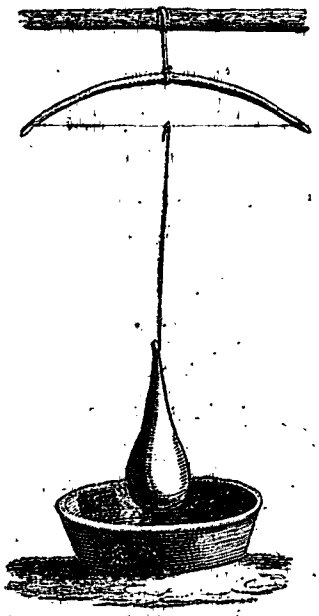
Leaving Tien-sing on the morning of the 8th of September, we quitted the Pei-ho and entered the Eu-ho or imperial river, called also the Yun-Leang-ho, or the grain-bearing river. The stream running two miles an hour against us, made our progress very slow for several days. We were forced against it by trackers who were often deserting, and replaced by any passing Chinese whose situation of life did not absolutely exempt them from the authority of our attendant Mandarins.

The country on the banks of the river varied much in character, but generally exhibited a greater number of highly fertile spots than in the same space we had seen on the Pei-ho. The "tall corn" no longer skirted their margin, but was chiefly seen in the back ground. Fields of petsai, garlic, and capsicum, gently sloped to the water's edge, in front of houses built of brick, and covered with a roof of clay. Buildings half-buried in the shade of trees occasionally variegated the distant prospect.

In visiting the cottages within the reach of my rambles, I was much interested by the appearance of the means of independent support possessed by many of their inhabitants. Millet, petsai, and the oil of sesamum, constitute in a good measure the ordinary fare of the lower classes in the north of China. All these were frequently growing around small huts, containing a mill for grinding the corn and expressing the oil, with all the subsidiary apparatus. The mill was put in motion by an ass, yoked to the end of a long arm fixed in the uppermost of the two circular stones of which it was composed.

I witnessed the different processes necessary to the preparation of the oil going on in different parts of the same cottage at the same time. A large quantity of the seed of the sesamum having been put into an iron pan, over a small brick furnace, was constantly stirred with an iron shovel till the whole had been sufficiently roasted. It was then transferred into a conical basket, placed in the centre of the upper stone. Shaken from a hole in the side of the basket by the motion of the mill, it passed through an aperture in the middle of

the upper stone to the surface of the lower one, where, being ground, it gave out the oil. This flowed over the lower stone into a reservoir below it. Here ended the process of expression; but another commenced, the intention of which I could not so well understand: it was probably connected with some mode of purifying the oil. I mention it chiefly as an example of the simple, and what may perhaps be called, domestic methods, sometimes in use with the Chinese, to diminish the degree of manual labour. A quantity of oil recently taken from the mill, and contained in a wide shallow vessel, was continually agitated by a large copper pestle, with which a lad gently struck its surface. The fatigue that would otherwise have arisen from the weight of the pestle and uniform motion of the arm in using it, was prevented by the following very simple contrivance: A small bow of bamboo being fastened to the ceiling immediately over the vessel containing the oil, the pestle was fastened to its string in the manner shown in the wood engraving. Thus suspended, it received from the slightest touch an adequate impulse; whilst the elasticity of the bamboo gave it the necessary recoil.



Near the same cottage, chance led me to the shop of a blacksmith, the manufacturer of various iron instruments, from a sword to a hoe. This man well understood the modifying properties of heat, and took the fullest advantage of them in all the practical concerns of his business. He was forming a reaping-hook at the time of my visit. A large pair of shears, having one blade fixed in a heavy block of wood, and the other furnished with a long handle to act as a lever, stood beside him. Bringing a piece of metal of the necessary dimensions from the forge, at a white heat, he placed it between the blades of this instrument, and cut it into shape with equal ease and despatch. This blacksmith, like all other Chinese manufacturers whom I saw at work, seemed proud of displaying his art to a stranger.

The desire of testifying my sense of the civilities I received by the offer of small presents, was sometimes an irksome feeling, from the difficulty of selecting those which were proper. Silver coin would, in every instance, have been the most acceptable; but the number of claimants rendered it too expensive a medium of general remuneration. Our small articles of hardware did not seem to be much valued. Our pen-knives, especially, were ridiculed as very useless toys. Razors were not much esteemed. Our polished scissars were, however, eagerly received. These were, in general form, like their own, and could be used for similar purposes, but were infinitely more elegantly shaped and finished. I cannot describe the delight of an old woman, an inmate of my boat, on my putting a pair into her hands. She saluted me with the chin-chin for many days afterwards whenever she saw me.* But my scissars were soon exhausted; and I should have been puzzled to substitute any adequate form of donation, if I had not fortunately

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* I can have no doubt that the Chinese would much more highly prize instruments made from their own models, but of more durable materials, and of better construction, than any made for European use. They would speak at once to their understanding. The use of our instruments, on the contrary, they cannot comprehend; and what they do not comprehend, they always believe to be absurd.

ascertained the excessive fondness of all classes of the Chinese for snuff. Sir George Staunton having put in my possession several bottles of Brasil snuff, which they prefer to any other, I always started on my excursions furnished with a good supply, in small packets, and found them accepted as a sufficient and grateful reward for any service. It was highly amusing to see the eagerness with which any one who had just obtained a packet was assaulted by those about him. The instant the paper was opened, thumbs and fingers from all quarters speedily emptied its contents. Although the Chinese would in this way take it from their companions, I could never persuade them to do so with me. They would shake it into their hands from the paper or box, but would never take it out of either with their fingers.

It was necessary, in giving any thing to the common class of people, to watch our opportunity when the soldiers who attended us were off their guard. Whenever they observed us offering any thing to their countrymen, they, by some sign or other, informed them that it was their property; and when once their basilisk look had taken effect, the victim durst not attempt to appropriate the gift. Of this influence I had several striking proofs. In passing from one bank of the river to the other, I often employed any poor waterman whose boat I chanced to meet with; but I do not recollect an instance of his being able to secure the slight payment he received from the rapacity of my guard. In one instance I obliged the soldier who crossed with me to land before me, and then gave poor Charon his fare, and made signs for him to push his boat from the shore. I thought he had done so, and walked off, keeping the soldier before me; but had not proceeded far, when my attention having been for a few minutes attracted by some plants, I missed the soldier; and on looking for him, saw him robbing the poor wretch, who had not dared to quit the spot on which I had landed. I could with all my heart have sent the soldier to the bottom of the river. But any violent expression of rage, on such an occasion, would only have been repaid tenfold on the unfortunate object for whose sake it had

been exerted. There could be no doubt, from the resigned manner in which the exactions of the soldiers were endured, and the public manner in which they were committed, that these infamous acts were sanctioned by their paternal government.

I have now reached that part of my narrative at which I must cease, for some time, to depend on my own journal for an account of the progress of the Embassy, and the nature of the country through which it passed.

On the 12th of September, after a long walk in an ardent sun, I was attacked with a sudden affection of the brain, which confined me to bed for several weeks. My suffering was great, but received all the alleviation that friendship and benevolence could bestow. I must not here pause to tell how much I owe to the skill of my medical attendants, my friend Mr. Pearson and Dr. Lynn; or to the numberless kind attentions of His Excellency, and all the gentlemen of his suite; but I must be allowed to declare, that all the purposes of my appointment as naturalist were largely answered during my illness through the exertion of my friends. I may venture to affirm, that no vegetable or mineral production of China occurred within their reach that was not placed in my collection, with such notices as were sufficient to determine their habits and localities. Indeed such was the amount of my collections through these means, that I looked forward to giving a full account of the geological and botanical characters of the soil gone over by the Embassy during my illness, as well as in other parts of its progress. This hope was blasted by the shipwreck of the Alceste. I must now confine myself to such notices of the plants and rocks of China, as are afforded by the memoranda remaining to me, and the few duplicates I have recovered through the kindness of Sir George Staunton and my friend Captain Basil Hall.

With respect to the history of the progress of the Embassy during my incapacity to observe, my readers will have little to regret, if I do justice to the materials which the liberality of my friends has placed in my hands. To Mr. Morrison and Mr. Cook I shall be

chiefly indebted for my facts from the period of my illness to that of my recovery.

The Embassy having continued to pass through a country uniformly flat, but becoming more and more marshy, arrived on the borders of Shan-tung on the evening of the 16th, and anchored at the town of Sang-yuen.

In quitting the province of Pe-tchee-lee, I had added very few specimens to my former collection of plants. The *Salsola altissimd*, *Euphorbia tithymaloides*, *Lepidium latifolium*, *Hedysarum striatum*, *Lonicera caprifolia*, *Pontederia vaginata*, *Menyanthes nymphoides*, constituted the greater number of the plants brought to me after leaving Tien-sing.

Our conductors, Chang and Yin, left us at Sang-yuen, relinquishing their charge to other officers. They had both ingratiated themselves so far in our good opinion, that we parted from them with regret. They were men of different characters. Chang, under an appearance of indifference for every thing European, was anxious to become acquainted with some of our most useful manufactures. He particularly admired our glass and plated goods; and in a conversation with me, through the medium of Mr. Morrison, asked many questions respecting them. After satisfying him on these points, I took advantage of this opportunity to tell him that we had metals which, on coming in contact with water, burst into flame. I had some potassium with me, and was desirous of showing its properties to him. He immediately inquired respecting its uses; and when these could not be very satisfactorily explained to him, looked too contemptuously to induce me to venture an experiment.

In return for my answers to his questions, Chang freely gave me true or false statements on any subject that excited my curiosity. After his evasion respecting the sick, I could not avoid receiving his information with much suspicion, and soon found fresh reason to suppose him fallacious from principle. Having put many questions to him about the localities of several stones, amongst others, the Yu which he wore in his girdle, he rightly concluded that I should con-

sider any specimen of the kind a very interesting present; and sent me, the next day, what he wished me to suppose a stone snuff-bottle, but which was only a very rude imitation of blood-stone in glass.

Yin, an old soldier, with ruddy complexion and laughing eyes, cared very little about the arts or sciences of his own or any other country. The only produce of Europe that seemed to interest his attention was port-wine or cherry-brandy; differing, in his taste for the former, from most of his countrymen.

The judge of Pe-tchee-lee, who had accompanied the Embassy from Tung-Chow, also left it at Sang-yuen. This man, a Tartar by birth, professed a great knowledge of Europe, obtained from books published in the Chinese language by the Missionaries; and took an opportunity of displaying it, in a conversation with Mr. Morrison, the day before he took leave of the Embassy. England, he said, was divided into four parts; and wished to know if it had four kings. He was rather supercilious in his remarks on the small extent of Great Britain, compared with other countries; and especially with China. "Your country is very small; our's (appealing to Chang, who was present,) is too large; it is very difficult to govern: my civil jurisdiction alone extends to the Gourkas." Wishing to impress his auditors with his intimate acquaintance with the domestic affairs of England, he observed, "All your teachers of religion wear beards; and you have loaves of bread three or four cubits in diameter." My reader will require no further illustration of the soundness and extent of this gentleman's information. He was, however, better informed respecting the geography and history of European states, than any other Chinese with whom the Embassy became acquainted.

Several gentlemen, in walking through the streets at Sang-yuen, fell in with three blind men playing on a dulcimer, a guitar, and a violin. Two of them accompanied the instruments with their voice, singing a duet, and keeping exact time with the tune. The harmony was pleasing. The performers were rewarded with a small gratuity; and on some soldiers crying out "Ko-tow," prostrated themselves, and bowed their heads nine times to the ground.

The Embassy left Sang-yuen before day-light the next morning, and entered a country generally swampy, but occasionally relieved by small houses surrounded with plots of cultivated ground, on which the tobacco began generally to appear. The boats anchored, at night, at a village within a short distance of a large lake on the east bank of the river.

On the 19th and 20th, the country assumed a more picturesque character from the quantity of a cypress-like tree, *Thuja orientalis*, which surrounded the houses and villages within view from the river. Willows of large size also broke the monotony of the scene.

On the 21st, the Embassy passed the city of Woo-chang-hien, the suburbs of which were remarkable for a handsome temple; and halted, on the 22d, at the pagoda of Lin-tsing. This pagoda is situated a mile to the north-east of Lin-tsing, and four miles from the entrance to the grand canal. It is called, by the Chinese, Shay-le-paou-ta*, or "a precious monument to Shay-le," or "the reliques of Foo." This building has been restored since it was visited by Lord Macartney's Embassy. At that period, the gentlemen who endeavoured to examine it, "mounted with some difficulty upon the first of its nine stages or roofs (for the little door on a level with the ground was walled up with bricks); but it contained only the bare walls; not even a staircase remained, nor any possible means of ascending to the top; and the lower part was choked up with rubbish." † The gentlemen of Lord Amherst's Mission ascended it by a winding staircase of one hundred and eighty polished stone steps, leading through its different stories. Each of these had eight windows, corresponding with its eight sides. Their floors projected two or three feet beyond the body of the building, forming a platform for walking above, and a roof to the compartment beneath. The architraves and angles of

* "Les *ta*, espece de tour sépulchrale ou superstitieuse qui est massive, pour l'ordinaire, comme une pyramide." Mémoires des Chin., tom. ii. p. 565.

† Barrow's China, p. 503.

the roofs were ornamented with wood richly carved. Idols were placed in niches of the walls, but were in a state of decay. Its height was estimated at one hundred and twenty feet. From an inscription on a tablet over the door of the building, Mr. Morrison ascertained the date of its erection to be the 13th year of the Emperor Wan-lech, of the Ming dynasty, answering to the year 1584 of the Christian era.

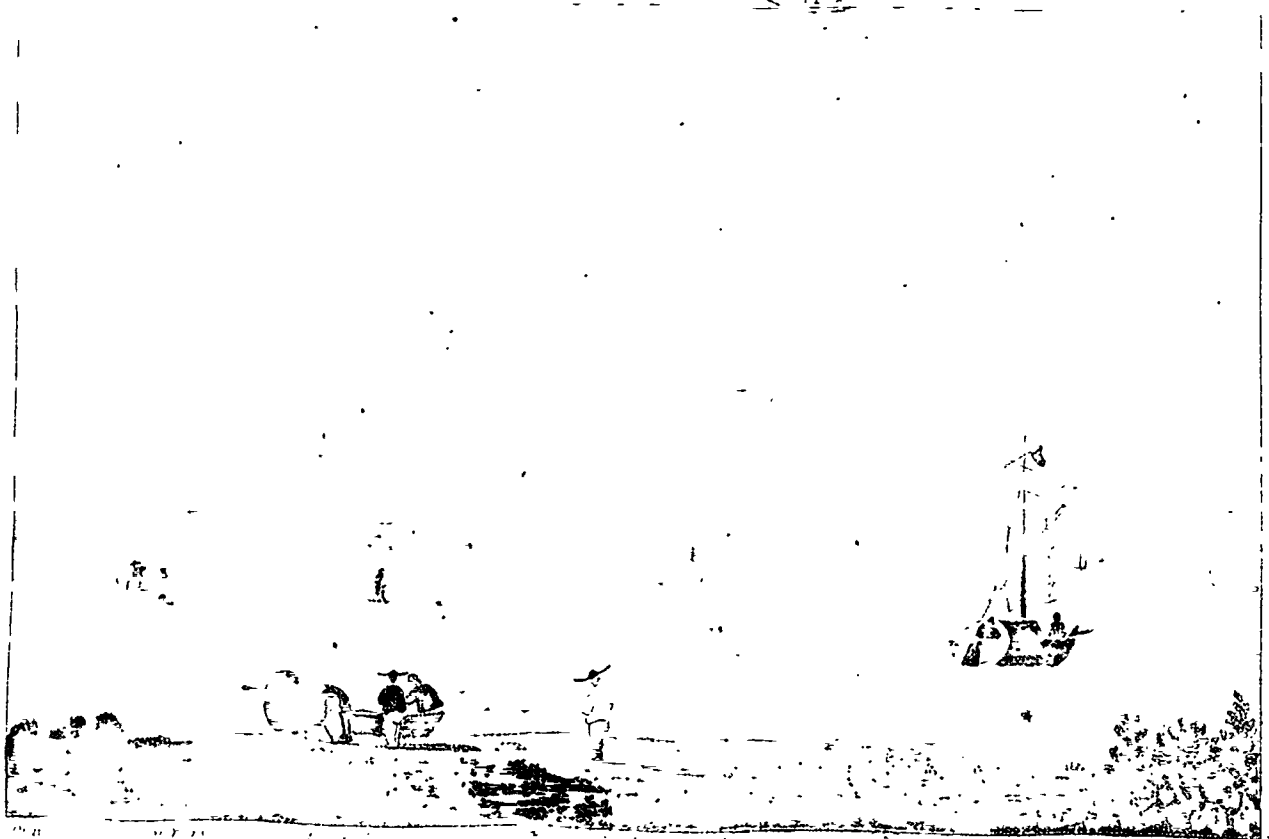
In the vicinity of the pagoda some buildings were seen, of a different style of architecture to any before met with. They were of a quadrangular form. The sides were equal, supporting a sloping roof. This was somewhat cone-shaped; had also equal sides going off from the corresponding walls, and rising in a point, surmounted by a round ball. They proved to be Mahommedan mosques, called, by the Chinese, Le-pee-tze. *

The Embassy passed the pagoda at two in the afternoon, and anchored at the entrance of the canal about four o'clock, leaving Lintsing to the north-east. The Eu-ho continued its course southward across the mouth of the canal.

On the 23d, the boats entered the canal, or Cha-ho, "river of floodgates," which at first took an easterly direction, but gradually swept towards the south; in this respect corresponding with the course given to it on the map of the Jesuits. It was wide at its entrance, but after a few miles, became covered with rushes, which closed the prospect on both sides.

On the 24th, the Embassy passed through several floodgates, often contracting the width of the canal to twenty-two feet; and, occasionally, scarcely permitting the passage of His Excellency's boat, whose greatest breadth was about nineteen feet. All these were of the simple construction described by former writers, being formed of "planks sliding in grooves that are cut into the sides of two stone abutments." In the evening, the boats anchored under the suburbs of Tang-chang-foo, distinguished by its handsome gates, square

* For a notice respecting the Mahommedans in China, see Appendix.



towers and great extent. Early the next morning, the first hills that had been seen since the Embassy left Tung-Chow, were observed rising in the south-east, and bounding an uninteresting plain of great extent. Continuing their progress, the boats passed, on the morning of the 28th, the mouth of the principal river which feeds the canal. The name of this river, called by the writers of the former Embassy Luen, is, according to Mr. Morrison, Wan; and is said to arise from seventy-two springs in the mountain called Tae-shan, in the province of Chan-tong. "It falls into the canal with a rapid stream, in a line which is perpendicular to the course of the canal. A strong bulwark of stone supports the opposite western bank; and the waters of the river striking with force against it, part of them follow the northern and part the southern course of the canal." This last circumstance has given the name of Fan-shang-Meaou, "the temple of the division of waters," to a religious edifice erected near the bulwark. It is also dedicated to Lung-Wang, the dragon king, and god of seas and rivers. From this point, as has been conjectured by Sir George Staunton*, whose supposition is borne out by Du Halde†, the canal was probably commenced. Whether the Wan-ho originally wound towards the north or south, or in a line with its present direction, cannot perhaps now be determined; but there can be no doubt that the natural course of its waters has been altered and directed northward through a channel cut to the Eu-ho, and southward, through a succession of swamps, (in rainy seasons, lakes,) to the Yellow River. Previous to crossing the stream of the Wan-ho, the boatmen prostrated themselves in the temple before a table covered with yellow silk, ornamented with the figures of dragons.

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* Embassy to China, vol. ii. p. 387.

† Dans la province de Chan-tong est une médiocre rivière nommée Ouen-ho, dont on a sçû diviser les eaux..... La plus grande quantité a été conduite dans la partie du canal, qui va vers le septentrion, où, après avoir reçu la rivière Ouen-ho (Eu-ho), il se jette près de la ville de Tien-tsing de la province de Pe-tche-li, dans la rivière de Peking, qui passe le long de ses murailles. L'autre partie de l'eau, qui n'est guères que le tièrs, en coulant au midi vers le fleuve Hoang-ho, ou fleuve jaune, &c. Du Halde, tom. i. p. 33.

Having entered the southern division of the canal, the Embassy proceeded, with the stream in its favour, through a succession of what the Chinese call *Hoo*, or "lakes." These, which in ordinary seasons are little else than swamps, had been swelled and united, by late heavy rains, into a waste of water, bounded in one direction by the horizon, in another by distant mountains. The embankments of the canal, supported, in the time of the former Embassy, by "retaining walls of coarse grey marble, cut into large blocks, bound together with clamps of iron," no longer giving it the appearance of an aqueduct much elevated above the adjoining country, were broken down by the inundation.

Cottages half submerged, or raised on little platforms of soil, occasionally interrupted the uniformity of the scene, which derived a very peculiar character from the Nelumbium in fruit, which every where appeared. Inhabitants of all ages were seen paddling about in search of it, in small machines, more like baskets than boats. Here and there, indeed, a more picturesque view was obtained, and enabled Mr. Cook to take the accompanying characteristic sketch of the lake Nan-wang.

The Embassy crossed a corner of the province of Kiang-nan on the 30th of September, and re-entering the province of Shan-tong, they next day crossed the mouth of the Shĕh-tze-ho or "letter ten river;" the Chinese characters for ten being two crossing lines.

Leaving the inundated country, and passing the mouth of the river Koo-shan-yin, whose waters accelerated the current of the canal, we reached, on the 3d, the borders of the province of Kiang-nan. The country now, for some distance, altered its character. Fields highly cultivated, and interspersed with innumerable hamlets buried in the shade of trees, covered undulating ground on both sides of the canal.

On the 5th, the masts and sails of vessels were seen, at no great distance, navigating the Yellow river, parallel with the course of the canal. This being the day of Chung-tswe-Tsee, or "full harvest moon," the boatmen made propitiatory sacrifices to their idols. Mr.

Cook has described the ceremony that took place on board his boat. "The Captain having placed two portraits of his deities, in wooden frames, on the forecastle, and arranged three cups of tea and two bundles of lighted sandal-wood before them, fell upon his knees, and after thrice bowing, bent his head three times to the ground. He then arose, and taking a lighted torch in his hand, walked round the bow of his boat, exorcising all evil spirits. Returning to the idols, he took up the cups, and emptied them over the side of the vessel. He then placed his deities on a small pile of paper, and having set the whole on fire, beat the gong till they were consumed; an assistant at the same time discharging a volley of crackers. Resuming his torch, he again traversed the bow of his boat; and thus terminated the ceremony."

On the morning of the 6th, the Embassy anchored within half a mile of the junction of the canal with the Yellow river, intending to cross the latter on the following morning. But a favourable breeze having sprung up soon after mid-day, the boats got under weigh, and entering the Yellow river on the north-east side, crossed its stream in an oblique direction, and gained the mouth of the channel destined to receive them on the opposite shore. That part of the river crossed by the boats was calculated to be about a mile broad, and flowed at the rate of three miles an hour. It had its characteristic colour and proverbial turbidness. *

The boats advanced up the channel called by the Chinese boatmen Tae-ping-ho, about four miles, passing a large sluice-gate on their right, through which the waters of the lake Hung-tse were rushing with great violence, and anchored for the night. On the following morning His Excellency and the gentlemen of his suite landed, during the passage of the boats through a floodgate with a dangerous fall. This floodgate was a short distance beyond a pro-

* "When they (the Chinese) speak of things that are never likely to happen, they say, *When the Yellow river shall become bright.*" Ogilby's China, p. 617.

jecting bulwark that divided the river at right angles; one branch going to the eastward, the other directly south, and forming the canal on which the Embassy proceeded. The sluice was formed of very compact masonry, and was called Tean-fei-Chă, "the lock of the celestial lady." The fall was not more than three or four feet. The larger boats were gradually let down by ropes, the smaller darted down, and rushing over the opposing water, dashed up a milk-white foam to the height of several feet. The boats advanced only six or seven miles during the day, being delayed by the passage of the locks.

On the 8th, the Embassy passed a large town called Tsing-Keang-poo. Near the middle of the town was a large floodgate, with an imperial pavilion on each side of the abutment. Over their gates, Mr. Morrison read, "The pavilion of the imperial ode;" and supposed it probable that some of Kien-Lung's odes, made during his journies to the south, had been cut in stone and deposited in them. They were now used as store-houses for ropes employed in repairing the floodgates.

Below the town, the banks of the canal were so high, and the surrounding country so low, that the tops of houses and trees seemed to be on a level with the eye of the spectator. The land in its neighbourhood was well cultivated with a red and white species of rice, millet, wheat, and vegetables, and was often variegated with groves of beautiful trees. The population seemed to be crowded. A military mandarin observed to Mr. Morrison, that the wars which had preceded and determined the ascendancy of the reigning family thinned the population so much that the earth produced for some time great abundance for the remaining people; but that their numbers had since increased to a degree producing scarcity and poverty. The officer seemed of opinion that another war would be beneficial to the country.

About two o'clock the Embassy passed the city of Hwae-gan-foo, whose walls stretched about three miles along the banks of the canal. They were not above the level of the water, and were in some places in a miserable state of decay. It was impossible not to shudder at

the consequences that would ensue by the giving way of the banks of the canal.

On the 9th the Embassy arrived, early in the morning, at the suburbs of Kaou-yen-chow. Several gentlemen with some difficulty obtained an entrance to a large temple, and found two or three hundred miserable wretches who had been confined in it all night. An attendant mandarin stated, that the boats having been expected the night before, these poor fellows had been pressed to track them; and from the apprehension that they would not come back if permitted to return to their homes, had been put in confinement the preceding evening.

The temple is dedicated to the Ming-keen-ship-wang, or "ten judges in Hades," consisted of ten apartments; a judge presided in each, surrounded by the ministers of punishment in the form of demons made of clay, variously coloured and distorted into hideous forms. Before him appeared the former inhabitants of this world, awaiting their doom. The visit was too hasty to permit a more minute examination of this interesting edifice.

On the night of the 10th, the Embassy passed the city of Yang-chou-fou, and anchored, on the morning of the 11th, before the pagoda of Kao-ming-tsee. From the top of this pagoda a delightful prospect was obtained of the surrounding country. To the northward was seen the walls and pagodas of Yang-tchoo-foo, and the canal winding in one place through a fertile country, in another through a succession of lakes; to the southward appeared the city of Kwa-tchow, and the celebrated Yang-tse-kiang stretching from east to west, covered with a multitude of vessels, and receiving the waters of numerous streams.

The Embassy remained at Kao-ming-tsee till the 14th, when, having changed the boats in which they had navigated the still surface of the canal, for others more adapted to the sea-like waves of the Yang-tse-kiang, dropped down to the city of Qua-tchow, situated at the entrance of that river.

A short distance above Qua-tchow, Mr. Cook and other gentlemen

visited the Woo-yuen, or "the five gardens," formerly a favourite imperial residence, and found them much in the state described by De Guignes. * "They covered a large space of ground, one part of which was filled with pavilions, either grouped or isolated, and communicating together by an infinite number of corridors and smaller buildings. These were all in a ruined state. The roofs had fallen in, and the window-frames and floors were rotten. One apartment alone contained any thing to interest curiosity. In this a pedestal of white marble supported a white slab inscribed with a sentence composed by the Emperor Kien-Lung. A serpentine river had in former times meandered through the gardens, but its bed alone remained. The remains of several bridges still existed, one of which had been of a curved form. Factitious rocks, of grotesque forms, the delight of the Chinese, were scattered about in all directions, and were still in a state of good preservation. These gardens, when in perfection, must have exhibited a good example of Chinese pleasure-grounds."

Surpassing the gardens in beauty and interest was a view obtained of a part of the Yang-tse-kiang, in the neighbourhood of Qua-tchow. Standing on a point of land projecting into the river, you see the Kin-shan, or "golden hill," rising like the summit of a mountain above the waters of the Yang-tse-kiang. Its appearance verifies the fidelity of those singular landscapes, given in Chinese books, of mountains insulated in the midst of rivers or lakes, and covered with houses and temples, and trees and flowers. The sides of the Kin-shan were clothed with trees shading houses and temples of light and fantastic forms. On the summit a grove of pines surrounded a magnificent pagoda which rose above them. Beyond the Golden hill is seen the city of Chin-Keang, situated at the foot of hills stretching away southward. Their dark-green declivities, when seen by the Embassy, formed a beautiful contrast to a camp of white tents scattered among them, and reflecting the rays of an unclouded sun.

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* De Guignes, tom. ii.

The Yang-tse-kiang, a league in breadth, covered with numerous vessels of every shape and size, some laying at anchor, others plying in all directions, forms the fore-ground of the picture.

The city of Qua-tchow did not answer the expectations raised by its advantageous situation. Its streets exhibited no characters of opulence, and its walls were in ruins. In the days of Kien-Lung, it flourished under imperial favour; being situated between the Five gardens and the Golden hill; which were places of his frequent resort. A canal had been cut through the city to the point of land opposite and nearest to the Kin-shan, to facilitate his visits. A bridge also, if Chinese vanity could be believed, was in former times thrown from this point to the hill itself, but had left no remains as a monument of its existence. Since these golden days in the history of Qua-tchow, as its governor informed Mr. Morrison, the Tung-shway, or "fortune of the place," had gradually declined.

At Qua-tchow, the Embassy ceased to navigate the imperial canal. The descriptions given by Sir George Staunton and Mr. Barrow of its extent and structure, and of the characters of the country through which it passes, correspond so well with the observations of the persons of Lord Amherst's Mission, that I have not thought it necessary to use the details on these points given in the Journals submitted to my inspection.

This famous monument of industry, considered simply as a channel of communication between different parts of the empire, appears to me to have been somewhat overrated as an example of the immense power of human labour and of human art. In every part of its course it passes through alluvial soil, readily penetrated by the tools of workmen, and is intersected by numerous streams. It would be difficult to find any part of it carried through twenty miles of country, unaided by tributary rivers. The sluices which keep its necessary level, are of the rudest construction: buttresses formed of blocks of stone, with grooves fitted with thick planks, are the only locks of

the imperial canal. It is neither carried through any mountain or over any valley. *

As a vast drain to marshes and lakes, and to the destructive overflowings of the Yellow river, it has higher claims to our admiration. Previous to its construction, the greater part of the provinces of Shantong and Kiang-nan, filled with lakes and marshes, from the Wan-ho to the Yang-tse-kiang, must at all seasons have been an uninhabitable swamp; and during the inundations of the Yellow river, one enormous lake. The canal being carried through their lowest part, and communicating by numerous floodgates with the surrounding water, has rendered them more or less subservient to the purposes of man.

During our route from Tien-sing to Qua-tchow, the banks of the canal had exhibited no production of much interest, excepting the peculiar aquatic vegetables afforded by the swamps to their almost amphibious inhabitants. Besides the Nelumbium, the *Trapa bicornis*, resembling in most respects the European plant of the same generic name, was extensively cultivated, and afforded a considerable vegetable support to the Chinese peasants. Its roots are sold in the markets as nuts are in Europe, and were constantly supplied to our tables. The root of the *Scirpus tuberosus* was also sold in this part of China, and was more highly esteemed than the *Trapa*; but the plant was not seen growing.

The rice fields on the banks of the canal had in some places abounded with snakes of two species, the largest of which resembled very closely the common snake of this country. It was found from three to six feet in length. The smaller one was transversely striped

* Ce canal qu'on appelle *Yu-leang-ho*, c'est à dire, canal à porter les denrées, ou bien *Yu-ho*, qui signifie Canal Royal, est sans doute merveilleux par sa longueur, qui est de plus de 160 de nos grandes lieuës, et encore plus par l'egalité du terrain où il a été fait. Dans une si grande étenduë de pays il n'y a ni montagne qu'il ait fallu applanir ou percer; ni carrières de pierres, ou de rochers, qu'on ait été obligé de couper ou de creuser." Du Halde, tom. i. p. 33.

with black and white, and did not exceed eighteen inches in length. Shells in considerable quantities were also found on the banks. These were chiefly of a species of *Paludina*, which, Dr. Leach has observed, is allied to *P. tentaculata* of Lamark, or *Helix tentaculata* of Linnæus; and which he has proposed to name *Paludina sinensis*. For specimens of these shells, I am indebted to their collector, Sir George Staunton.

The latitude of Qua-tchow Dr. Lynn determined by observation to be 39° 40′ north. The same gentleman found the mean temperature at noon, whilst he remained at this place, to be about 67·5.

CHAPTER VI.

On the morning of the 19th of October, the Embassy entered the Yang-tse-kiang, and took leave for some time of the route pursued by Lord Macartney. Keeping close to the left bank, which was covered with high rushes used for fuel, the boats proceeded up the river with a scanty breeze, and anchored on the morning of the twentieth, after a progress of not more than twenty miles, in one of the many creeks which afford shelter to vessels navigating this river. In the evening the boats again moved with a favourable breeze, and passed on the following morning two hills, connected by a stone arch, called Quan-yin-mun, "The Gate of the Goddess Quan-Yin." On one side was a picturesque rock, overhung with shrubs, and crowned with trees surrounding a pavilion; on the other was a romantic temple, built against a perpendicular rock, called the "Iron-bound solitary Hill."

At six o'clock the Embassy reached the suburbs of Nankin, and anchored opposite the western gate of the city, at the distance of two or three miles. This city, so famed for its extent, that the Chinese declare, if two horsemen start at break of day from any point of its walls, in opposite directions, and gallop round them, they will not meet till sun-set, is, according to authors of definite language, enclosed by a wall fourteen* leagues in circumference. In earlier ages the sovereigns of China made it the capital of the empire; but when they transferred their residence to Pekin,

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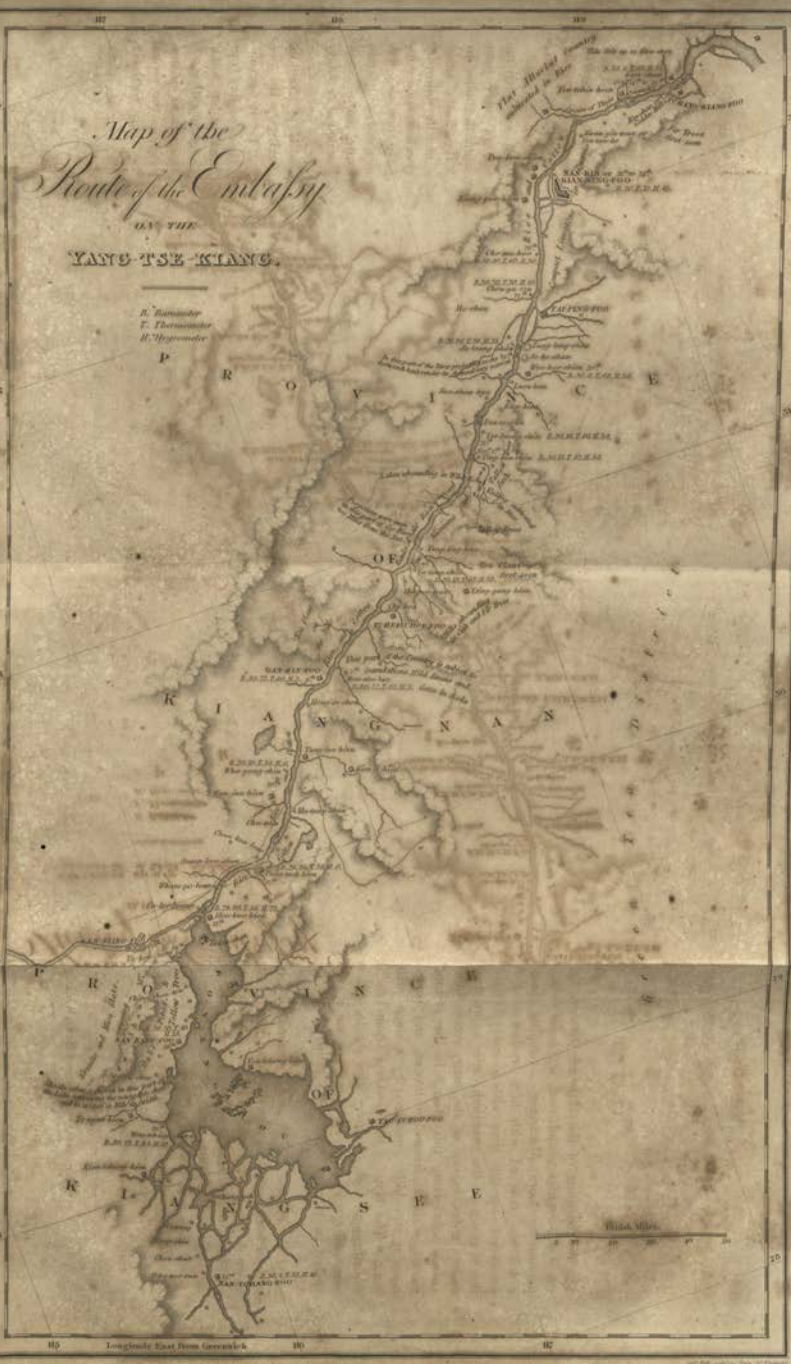
* Mémoires concernant les Chinois, tom. ix. p. 437.


Map of the
Route of the Embassy
ON THE
YANG-TSE-KIANG.
R. Barometer
T. Thermometer
H. Hygrometer
P R O V I N C E
O F
K I A N G N A N
P R O V I N C E
O F
K I A N G S E
English Miles
Longitude East from Greenwich

they changed its name of Nankin, or the southern court, for Kiang-ning-foo. Its older name is still retained in common discourse, but its later one appears in all the public acts of the empire.

Known to Europeans by the writings of the Missionaries, and more generally by the peculiar manufacture which bears its name, the city of Nankin was an object of much interest to the members of the Embassy. On approaching it, every eye endeavoured to obtain a general view of its more elevated buildings, but could only trace the appearance of a wall skirting a distant hill. The lateness of the hour when the boats anchored, prevented any attempt to reach it that evening.

Early the next morning a party entered the suburbs, and following the direction of a paved road which led through them, reached the desired gate, and entered, not a city thronged with people, but a thick coppice bounding their view on all sides. Turning to the left, they ascended a hill three or four hundred feet in height, and overlooked an extensive space intersected with paved roads, probably the remains of streets, now leading through plantations of bamboo surrounding detached buildings and cultivated fields, interspersed with hills of different elevations; the whole being enclosed by a wall whose limits they could not precisely define. Its form seemed to be an irregular polygon of the computed area of thirty miles.* Near one of its angles appeared what might be the inhabited part of the city; but, seen at the distance of five miles, was only marked by confused buildings surrounded by a wall, and the celebrated porcelain pagoda which stood in its immediate vicinity.

The following morning four gentlemen reached, by a paved road, a hill that overlooked the inhabited part of the city; and commanded a view of a common Chinese town, surrounded by an

* "The area under our view could not be less than thirty miles, throughout diversified with groves, houses, cultivation, and hills; this expanse might be said to be enclosed within the extensive wall, and formed an irregular polygon." — Ellis's Embassy, page 304.

inner wall, but exhibiting no characters of any peculiarity. They were prevented entering it, partly by the representation of the soldiers, but chiefly by a numberless crowd that assembled about them. Their disappointment was the greater, as they had hoped to reach the porcelain tower, which was not more than two miles off. Its appearance, at this distance, accorded with the description given of it by different writers.

Of all the describers of the Porcelain Pagoda, Le Comte, copied by Du Halde, and referred to by other authors, is the most authentic.* From his account, it appears that it is an octagonal tower two hundred feet high, divided into nine stories, the base resting on a massy foundation of brick-work raised ten feet from the ground, and surrounded by a flight of twelve steps; that the lowest story, which is the largest, has a circumference of one hundred and twenty feet, giving to each face fifteen feet; that the other stories are of smaller dimensions, and decrease in breadth as they ascend, but are of equal height throughout; that the whole building is terminated by a large pole, which, rising from the centre of the eighth story, passes through the ninth, which it exceeds thirty feet; that this is surrounded at the distance of three or four feet by the convolutions of an immense iron hoop, sufficiently remote to appear in the distance like rings, diminishing as they ascend, in the manner of a cone, and surmounted by a gilded ball; that each story has projecting roofs, with tiles of a green colour highly varnished; that the walls are faced with coarse porcelain slabs; that in the interior, one hundred and ninety steps lead through its different compartments, which are filled with gilded idols, placed in niches of the walls. Drawings of the Pagoda, with descriptions annexed, were sold in the suburbs of the city. These state that it was begun in the sixteenth year of the reign of Yung-lo, of the last dynasty, and

* See Le Comte.

finished in the sixth year of Scun-tih, having been nineteen years in building; and that it cost more than two millions, four hundred thousand of taels of silver, or above eight hundred thousand pounds. They add a legend, that the God of Thunder, in pursuing demons to the Pagoda and there destroying them, has injured the fabric: it has probably suffered by lightning.

In visiting the suburbs of Nankin, the Embassy found little to interest their attention, excepting some public hot baths near the gates of the city. To Mr. Poole, whose journal has often been of great use to me, I am indebted for the following description:—"We entered a square building divided into three compartments; the outermost lined with closets for the reception of the clothes of the bathers who undressed in this division of the establishment. The closets were all ticketed, perhaps with the names of their proprietors, or with some recommendatory sentence: Mr. Morrison read on one, 'The Bath of fragrant Waters.' The two other divisions of the building were beyond the first: the large, on the right hand, containing three baths, about six feet in length, and three in width and depth. At the time of our visit, they were filled with Chinese, who, rather washing than bathing themselves, stood upright in the water, which was only a few inches deep, and threw it by turns over each other's backs. There appeared no intention of renewing the water thus become saturated with dirt, for the use of many other Chinese who waited their turn in the outer apartment. The steam arising from it, however fragrant to the senses of the Chinese, was to mine really intolerable, and drove me away before I could ascertain in what manner the baths were heated. I just looked into the adjoining room, and found it furnished with matted benches, and that it was used by the bathers to dry themselves in before going to dress in the outer apartment."

Baths, it would appear, are by no means in common use amongst the Chinese, as we met with no others in our journey through the empire. Neither are they often mentioned in the accounts published

of China by the Jesuits. Du Halde*, indeed, says, that there is a large establishment of them in the neighbourhood of Pekin, resorted to by the Emperor; and Mr. Bell † states generally that they are used as a remedy; but neither writer induces the belief that they are used as a means of cleanliness.

In the suburbs of Nankin, the cloth which bears its name was exposed for sale. The raw yellow cotton, from which it is supposed to be made, was in vain looked for; but the white, was seen dressing in several places.

Amongst many other plants that grew on the walls of Nankin, the *Rosa Banksiana*, *Cotyledon spinosa*, of Linnæus and Murray ‡, *Hamamelis Chinensis* of Sir Joseph Banks' herbarium, and the *Ficus repens*, were the most abundant. The *Ficus repens* almost hid the walls by its profusion. The *Hamamelis*, which much resembled it in habit, was in less quantity, but also grew in the enclosure. A description of this plant, by Mr. Brown, accompanied by a figure, enriches the Appendix to this work. The expressed juice of the *Cotyledon spinosa* is said to be used by the Chinese women for dying their hair of a black colour, and preventing baldness.

Amongst the larger plants, the *Pinus Massoniana* of Mr. Lambert, and the *Ginko* of Kæmpfer, *Qua-tchow* of the Chinese, and *Salisburia adiantifolia* of Smith, were found in the enclosure and without the walls; but in no great number. The fruit of the *Salisburia*, however, was exposed for sale in such quantities as to prove its

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* L'Empereur logea dans une maison qu'il a fait faire exprès: cette maison n'a que trois petits pavillons fort simples; dans chacun de ces pavillons il y a des bains, outre deux grands bassins quarrés qui sont dans la cour assez proprement bâtis; l'eau qui est dans ces bassins, a quatre à cinq pieds de profondeur: la chaleur en est modérée: on m'a dit que ces bains étoient fort fréquentés.—Du Halde, tome quatrième, p. 288.

† Bell's Travels, vol. ii. p. 123.

‡ Nov. Comm. Gott. tom. vii. p. 33. I venture to adopt Murray's name in preference to the last Linnæan one of Crassula, because I find my specimens not only possessing ten stamina, but a monopetalous corolla, although its divisions are very deep.

extensive use amongst the Chinese; but whether as a fruit, a vegetable, or a medicine, could not be ascertained. *

The walls of Nankin, judging from a specimen now in my possession, are built of a grey compact limestone which frequently occurs in quarries in its neighbourhood.

Leaving this city on the twenty-fourth, the Embassy proceeded on their route through a country becoming every day more interesting from the approach of mountains to the banks of the river, and arrived on the 30th at the city of Woo-hoo-shien, remarkable for its cleanliness, the size of its shops, and for a temple lately erected. The entrance to this was through a succession of arches, supported on columns of solid marble highly polished. Their vaults were richly carved into figures of the same form as those seen in temples established for ages. The building was dedicated to the god Fo.

On the first of November, the Embassy halted at the village of Tung-ling-hien, and first gathered the tallow tree, *Croton sebiferum* of Linnæus, which here seemed to be used merely as fire-wood.

The banks of the river near the village were very high, and exhibited a remarkable stratification. Close to the water was a bed of pudding-stone, above this was a bed of red gravel, then a dyke of solid rock four or five feet in thickness, and then the soil composing the surface, also of red gravel.

On the third, the Embassy arrived at the small town of Ta-tung, and remained there in consequence of unfavourable winds till the seventh. During this delay, they were much annoyed by a great number of public retiring houses, which lined the outskirts of the town, by which the boats anchored. These, which we saw in most cities in China, seem constructed rather for exposure than

* Kæmpfer tells us, that the kernel of the fruit is supposed to assist digestion: "Nuclei à prandio adsumpti, coctionem promovere, ac tumentem ex cibo ventrem laxare dicuntur: inde nunquam ex mensâ secundâ solennis convivii omittuntur."— Amœnitates Exoticæ, p. 812.

concealment, being merely open sheds, with a rail-way over the necessary reservoir, and seldom without several occupiers.

The proprietors of these establishments derive great profit from the sale of their contents, called by them *ta-few*, which they use extensively as a manure. It is prepared in several ways. Sometimes it is mixed with a large quantity of mould, and made into cakes. In forming these, a layer of a few inches in thickness is spread out in the open air on an even surface, and, when dry, is divided into pieces of the requisite dimensions, generally about a foot square. These, which it is asserted not only lose the odour of their principal ingredient, but acquire that of the violet, are conveyed all over the empire, and find a ready sale. Before being used, they are dissolved in large quantities of water, or broken into small pieces, and are then applied to the land. When, however, the *ta-few* is to be employed near the place in which it is accumulated, a different mode of preparing it is pursued and generally preferred. In pits lined with plaster, it is diluted with a large proportion of water, and suffered to remain several days before it is used. It is then either poured into small channels that traverse the fields in every direction, or applied directly to the roots of the plants, or scattered over them with a small bucket. For its more convenient distribution, the peasantry have usually a tub for its reception sunk in the centre of their small gardens, in the neighbourhood of their cottages. To the use of this manure is in a good measure to be attributed the surprising productiveness of small plots of ground about Chinese huts, especially in their favourite vegetable the Petsai. It is not, however, confined to this plant, but largely used in their cotton fields, to young plants of which it is applied in considerable quantities. That it is used also in their rice-grounds, and in all cases in which manure is required, there can be little doubt.

A writer* has observed respecting the latter mode of preparing

* Mémoires concernant les Chinois, tom. ii. p. 613.

the *ta-few*, that as it is the most offensive, we are justified in supposing that it is the most efficacious; and adds generally, with regard to the kind of manure, that it is demonstrated by experience that the *ta-few* is the most useful and the most efficacious of all manure, especially upon wet and greasy lands. Its extensive use by the Chinese may perhaps be the consequence of much fewer animals being used in the cultivation of the lands in China than in other countries, and of the poorer class living not more on corn than on vegetables; for the cultivators of these are generally small cottagers, who are obliged to employ the means most within reach for raising their crops.

In the village of Ta-tung, many workmen were employed in freeing the white cotton of its seed. The mill used for this purpose was very simple in its construction, and resembled in most respects that employed in the same operation in the East Indies, which has been described and figured by Dr. Buchanan. * It consisted of two wooden cylinders, placed horizontally one above the other, on a stand a few feet from the ground. The cylinders, very nearly touching, were put in motion by a wheel acted upon by the foot. The cotton, being brought to one side of the crevice, intervening between them during their revolution, was turned over to the opposite, whilst the seeds, being too large to enter, fell at the feet of the workmen. The instrument used in freeing it from knots and dirt, is equally simple, and is the same as that used, I believe, in most countries for the same or a similar purpose. It is a very elastic bow with a tight string. In using it, the carder places it in a heap of the material, and, having pulled down the string with some force, he suddenly allows the bow to recoil: the vibration of the string scatters

* A Journey from Madras through the countries of Mysore, Canara, and Malabar, vol. iii. p. 317.

the cotton about, and separates it into fibres freed from all knots and impurities.*

The country about Ta-tung was hilly and picturesque, and productive in rare plants. It was here that some of the trees and shrubs, peculiar to China, were first met with. A small plantation of tea, from its extent, seeming rather to be cultivated for experiment than for the purpose of manufacturing, was seen on the side of a hill. It was of the large-leaved variety.

The plants most interesting to the finders, were several species of oak, occurring in large plantations. This tree, equally prized and used in China as in other countries, has been described and eulogised in the ancient books of the empire, and is designated by the appellation of the Tree of Inheritance.† The same works assert, that oaks, upwards of a hundred feet in height and twenty-four in circumference, are frequent in China; and that others have existed whose foliage covered an acre of ground. That for building, dyeing, and fuel, they are in general use. That their various parts used in medicine in other countries, are employed with similar views in China. That acorns are in some provinces an efficient article of food; that some are esculent without preparation; that others must be deprived of their crudeness, after being denuded of their husks, by grinding them in a mill, and subsequent immersion in water for several days; and that both afford a farinaceous paste, which, mixed with the flour or corn, or by itself, is made into cakes.

Such is the history of the Oak given by those who had the best means of arriving at information about it. I cannot learn that the gentlemen who visited the plantations of the tree near Ta-tung met with any circumstances either confirming or contradicting it.

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* This instrument scarcely at all differs from that figured in Sonnerat.—Voyage aux Indes Orientales, tom. i. p. 108.

† Mémoires concernant les Chinois, tom. xiii. p. 484—490. This work contains a very interesting account of the oaks of China.

Of the oaks seen at this place, many were remarkable for their beauty, few for their size. The largest seen did not exceed the height of fifty feet. They seemed to be used chiefly as pollards; considerable quantities of their branches being accumulated for firewood, or perhaps for charring.

One of the largest and most interesting of these trees, which I have called *Quercus densifolia*, was an evergreen, closely allied to the *Quercus glabra* of Thunberg, and resembled a laurel in the shining green of its foliage. It bore its branches and leaves in a thick head, crowning a naked and straight stem. Its fruit grew in long upright spikes, terminating the branches. Another species, *Quercus Chinensis* *, growing to the height of fifty feet, bore them in long pendulous spikes. Of this I have fortunately preserved a good specimen, through Sir George Staunton, and have given the accompanying figure. The leaves of some were distinguished by red prominent veins on the under surface; others by their size, and some by the hair, like processes, which fringed their margin. Five distinct species were found in a short walk.

Growing with the oaks, were some dwarf chesnuts; the fruit of which was exposed for sale at the village, and were not larger than the common bon-nut of this country.

From the shops of the same place I received several species of fern, which are used as vegetables, infused as tea and administered as medicine. The most general was the *Pteris piloselloides*. Ginger was also much grown among the hills, and sold in the shops in a green state as a common vegetable.

The country in the vicinity of Ta-tung owed its chief interest to its plants. The people continued to display the same curiosity in observing the strangers as elsewhere, but exhibited few traits of character worth recording. The only interesting circumstance that

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* See Appendix.

seems to have been observed is told by Mr. Morrison, who, in one of his walks, fell in with a family of four generations, amounting to about twenty persons, in the same house. At the feet of the Patriarch, who was only seventy years of age, stood his great grandchild, whilst at one end of the room his son was working at his father's coffin. The old man, on being asked why he now prepared his coffin? answered, that he felt his health declining, and wished to have a resting-place prepared for him after death. When asked if the sight of the coffin did not excite mournful ideas, he replied, "No." A mandarin, who was by, remarked, "His mouth says no, but it does not speak the language of his heart."

The Embassy left the village of Ta-tung on the morning of the seventh, and, continuing their route, arrived on the eleventh at the village of Hwa-yuen-chin, no otherwise remarkable than as being the scene of a fatal accident to one of the Embassy. William Millidge, one of the guard attached to Mr. Morrison's boat, in passing along its gang-way, fell into the water, and, in spite of every exertion made to save him, was swept under the boat by the current and was drowned. The Legate halted the boats till his remains were interred, and a tomb-stone placed at the head of his grave with the following inscription in Chinese characters:—"The Tomb of Millidge, one of the Body Guard of the British Ambassador, November 12th, 1816."

The boats having quitted Hwa-yuen-chin immediately after the interment of the body, passed in the afternoon of the twelfth a conical rock, two hundred feet in height, called Seaou-koo-shan, or the little orphan hill, rising in the middle of the river. This rock is composed of pudding-stone, and resembles in most respects the Kin-shan.

Early on the 13th, the Embassy reached the borders of the province of Kiang-si, and entered it on the following morning.

By noon the next day, the Embassy quitted the Yang-tse-kiang, whose broad expanse was seen far away to the westward, and entered the Po-yang lake.

The entrance to this lake was grand, from the immense chain of mountains forming its western boundary, the most conspicuous of which was distinguished by its five peaks. On entering the lake, the Embassy passed the Ta-koo-shan, or great orphan rock, less interesting in all its characters than the smaller one of the same name.

On the 14th, the boats reached the small town of Ta-koo-tang, and were detained there by boisterous weather till the sixteenth. During this delay, parties visited the neighbouring country, and found it abounding in several plantations of oaks and firs; to which were now added occasional plants of the *Pinus lanceolatus*, brought to Europe by the former Embassy. A very distinct new genus also rewarded the pursuits of my friends, with a description of which Mr. Brown has enriched this work, and called *Abelia Chinensis*. This plant, which was not met with after leaving the Po-yang lake, is a straggling shrub with pendant branches. Its flowers were, for the most part, faded when it was found; but its permanent pink calyces, clustered into thick heads, gave it a beautiful appearance. The tallow-tree also grew here in abundance, and was a most magnificent plant. I shall have occasion to describe it elsewhere.

Leaving Ta-koo-tang on the morning of the 16th, the Embassy arrived the same day at the city of Nan-kang-foo, situated at the base of a lofty mountain forming part of an extensive ridge. Snow covered the summit of the mountain, which, according to the Chinese, would remain till the fourth moon of the ensuing season, but melted before a bright sun the next day.

The city of Nan-kang-foo scarcely repaid those who visited it the trouble of the walk. The appearance of the walls, which had lately been repaired, had promised a populous and thriving city; and such it had been in former ages; but it now contained very few houses, compared with its extent; and was filled with beggars. A number of stone archways still remain, that appear formerly to have been superior specimens of their style of architecture: men, quadrupeds, and birds, are sculptured upon them in relief: they bear the dates of

Han-lish and Kean-tsing, of the last dynasty. There are two temples in the city dedicated to Confucius, and a Woo-meaou, or temple, dedicated to the military demi-god of China.

The neighbourhood of Nan-kang-foo contains some of the most romantic scenery seen by the Embassy in China. Of this the founder of the Pih-luh-tung-shoo-yuen, or "College of the white stag valley," had taken the fullest advantage, and built it at the farther end of a deep ravine shaded by trees, and watered by a beautiful spring. This temple is famous in China, as having been anciently a national seminary in which Choo-foo-tze, the favourite commentator of Confucius, taught about six hundred years ago. Those who were conversant in Chinese literature took the first opportunity of visiting it, in the hope of meeting with some books containing the doctrines of the sage. On reaching the temple, they found no difficulty in persuading the priests, after previously wiping their face and hands with a wet towel, to lead them to a well-stored library; but on this occasion could not bribe the priests to dispose of any of the sacred volumes. The valley in which the temple stands, derives its name from a white stag; the image of which is placed in an arched recess of the temple behind a statue of Choo-foo-tze. This animal, according to the chronicles of the place, was employed by the sage as his caterer at the market of Nan-gang-foo, at the distance of seven miles; money and a note having been attached to his horns, he was despatched to the city, and always returned with the wished-for supplies.

The neighbourhood of Nan-kang-foo being rocky, afforded fewer species of trees and flowering plants than many other parts of the country through which we had passed; but abounded in rare and undescribed ferns and mosses. Amongst many other ferns, I have it now in my power to name the following only: *Adiantum flabellulatum*, *Asplenium lanceum*, *Aspidium varium*, *Blechnum Orientale*, a species of *Davallia* very closely allied to *Davallia Canariensis*, a species of *Hydroglossum* very common in the south of China, *Polypodium lineare*, *Pteris semipinnata*, *Pteris biaurita*, and another species of *Pteris*, between *Pteris caudata* and *Pteris aquilina*, and a new species of *Wood-*

wardia allied to *Woodwardia Japonica*, but differing from it, in having acute lobes.

An Ilex was brought me, which I have been unable to distinguish from the *Ilex aquifolium* of this country. A species, I believe, of mulberry, with fruit of the colour and general appearance of a strawberry, but clustered around the branches, was also gathered in this part of our route.

Leaving Nan-kang-foo on the 20th, the Embassy arrived the same day at Woo-ching-chin, situated, according to Mr. Morrison, on the left bank of the Tan-ho, which flows by the capital of Kiang-si, and enters the Po-yang lake. Woo-ching-chin is a great depôt for the commodities of various provinces, and is distinguished by its numerous Kwung-kwan, or halls of merchants. At Woo-ching-chin, the boats quitted the Po-yang lake, and, proceeding on their route, reached Nan-chang-foo on the twenty-third.

My readers may, in this part of my work, complain of the rapid manner in which I have hurried them over upwards of two hundred miles of one of the finest rivers of China, and across one of its largest lakes. I have done so, because I believed that a short and general description, accompanied by a map of our route, rendered as expressive as circumstances will admit, would be more interesting than a detailed account of the different towns and temples visited on their banks. Every thing artificial in China has nearly the same characters in every province. A person who has seen one of its cities has in a good measure seen them all. The materials of which they are formed differ as their situation affords clay or stone, but their style of building is always the same. Such also is the case with their pagodas: they differ in height, and the number of their stages; but a pagoda at Pekin, at Nankin, or at Canton, would each afford nearly the same description. The features of the country, however, are infinitely varied. China, from the great extent of latitude contained in its boundaries, and from its extensive plains and lofty mountains, partakes of the advantages and defects of many climates. The weather and the season during the passage of the Embassy, prevented them from forming a correct judg-

ment in what degree the Yang-tse-kiang partakes of either. Enough, however, was observed to vindicate its claim to its high-sounding appellations: Yang-tse-kiang, "Son of the Sea;" Ta-kiang, "Great River;" Kiang, "The River;" the pre-eminent titles given to it by the Chinese: its great depth has occasioned the saying, that "as the ocean is boundless, so is the Yang-tse-kiang fathomless." There can be little doubt, indeed, that for the extent of country which it traverses, and the number of streams by which it is fed, it may be considered one of the finest rivers of the Old World. The concurring testimony of the Chinese and the charts of the Missionaries, show that it flows from west to east, in a devious course, through the whole breadth of China. Of its numerous tributary streams and lakes, the reader may form some comprehension by examining the more general map which accompanies this work, bearing in mind that its scale is necessarily so small as to exclude the insertion of many. To have an accurate conception on this point, he must consult the great chart of the Missionaries.

I have scarcely an observation to make on the Po-yang lake. The Embassy entered it with the expectation of seeing an expanse of water thirty French leagues in circumference, but passed rapidly along its western shore without gaining a single view of any very great extent. Their disappointment was perhaps the consequence of the haziness of the weather, and the many islands which cover it. Ranges of high mountains, which chiefly skirt its western shore, supply, no doubt, many of the rivers which feed it. The same mountains must often give rise to sudden gusts of wind, and may sometimes occasion the hurricanes which, the Missionaries declare, often sweep the surface of the lake.

The general cultivation on the Yang-tse-kiang and Po-yang lake was in rice, wherever the nature of the land allowed it. The *Arum esculentum*, petsai, and ground-nut, *Arachis hypogœa*, were also exceedingly abundant, and afforded a vast quantity of vegetable food. Deer were seen, and pheasants, partridges somewhat resembling grouse, snipes and wild fowl were common in the markets; geese

EXOCOETUS SPELENDENS.

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and ducks occurred in large flocks on the river and lake, and were so tame that they could be approached within a few yards. A woodcock was pursued by a gentleman at Qua-chow. Both the Yang-tse-kiang and Po-yang-ho are profusely productive in excellent fish. Carp and mullet abounded in the markets of all the towns visited on their banks by the Embassy. A few porpoises were observed in the river, and were called river-pigs by the Chinese.

The scenery of the Yang-tse-kiang and Po-yang-ho combined that of every river and lake enclosed in a mountainous and verdant country, and a peculiarity arising from numerous islands, often rising abruptly two or three hundred feet above their surface, covered with the grotesque buildings of the Chinese, surrounded by groves of bamboo and pine. They, for the most part, exhibited the same characters as the Kin-shan, or Golden Hill, and like it verify the accuracy of many Chinese landscapes.

The *Pinus Massoniana*, and several species of oak, mingled occasionally with the tallow and camphor trees, were the chief ornaments of the shores of that part of the Yang-tse-kiang and Po-yang lake gone over by the Embassy. The Pine was often in considerable groves, and appeared to grow at a great elevation.

A bluish grey compact lime-stone was found amongst the debris of the shores of the Yang-tse-kiang, and in quarries in the neighbourhood of Nankin. The islands which were examined consisted of an agglomerate, composed of round and angular fragments of quartz, of lime-stone, and of felspar porphyry, either united by a very thin argillaceous cement, or imbedded in sand-stone. The banks of the river sometimes presented a similar formation. The Leu-shan mountains, near the junction of the Yang-tse-kiang with the Po-yang lake, were composed of small-grained granite, containing milk-white felspar, smoke grey quartz, and greyish black mica; and of a micaceous schistus with scarcely any quartz. Very large perfect crystals of felspar were also brought to me from the same place: many of them were three or four inches in their largest diameter, and

were often conjoined with masses of light grey mica, of nearly equal dimensions.

The map which introduces this chapter will convey to the reader some idea of that part of the Yang-tse-kiang gone over by the Embassy, and of the extent and form of the Po-yang lake as laid down by the Missionaries. I have marked on it the height of the barometer, thermometer, and hygrometer, at noon every day during our passage, and the productions of the country as far as I could obtain accurate information respecting them.

The barometer varied very little during our route from Quachow to Nan-chang-foo, but the hygrometer rose or fell with every change of the wind. The thermometer often fell below 50° of Fahrenheit. The prevailing wind was north-easterly, which depressed the hygrometer, whilst southerly winds raised it; an effect contrary to what I had observed in the Yellow sea. This difference of result is obviously explained by the consideration, that in the Yellow sea the north-easterly wind was from the land, and therefore a dry wind, and on the Yang-tse-kiang, a sea wind, and therefore a moist wind, and *vice versa* with respect to the southerly winds. These circumstances are further conclusive of the delicacy of Leslie's hygrometer as a meteorological instrument. For the details of the experiments, I refer my reader to the Appendix.

CHAPTER VII.

At Nan-chang-foo, where the Embassy re-entered upon the route pursued by Lord Macartney, I went abroad for the first time after my illness, and had regained sufficient power of observation to be interested in the scenery and productions of the country through which we were passing. For the conclusion of this work, I depend chiefly on my own journal.

The city of Nan-chang-foo is famous for shops of porcelain, and gave us many opportunities of examining splendid vases formed of the finest quality of this celebrated ware. Many of these were four feet high and two in their largest circumference, of various colours, and covered with an immense number of raised figures of plants well executed. This imitation of sculpture was also practised on smaller pieces, as cups, basins, and especially snuff-bottles. On one of these, whose surface could not be more than six inches square, the forms of a crowd of Chinese executed with precision and taste, were beautifully grouped. I have repeatedly seen on articles of this kind a display of skill and accuracy in the delineation of the human form for which it is not usual to give the Chinese credit. The porcelain most valued by the Chinese was not in our eyes the most beautiful; being covered with lines intersecting each other in all directions, occasioning a cracked appearance on its surface. This is done perhaps to give it an appearance of antiquity, as antique porcelain is in the highest degree valued in China.*

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* The Missionaries give a different account of the *Porcelaine Craquelée*:— L'eau qui se glace en hiver, dans certains vases, a exactement la forme de la porcelaine craquelée. Il est tout simple que, voyant la forme d'un vase en eau glacée de cette

Some of the representations on the cups and other vessels sold in Nang-chang-foo, gave us the lowest opinion of Chinese sentiments of decency. Although infinitely too gross to admit any description, they were not only exposed in the most open manner on the shelves of the shops, but were handed about by the salesmen as objects of peculiar interest.

The shops in which the porcelain was sold were capacious, and very neatly fitted up. Indeed I scarcely recollect seeing any spectacle in China that gratified me more than a first-rate porcelain warehouse. The various articles of all forms, dimensions, and colours, were so arranged as to produce the best effect. Our purchases were inconsiderable, in consequence of the difficulty of transporting such brittle goods, and of the usual exactions of the soldiers. The prices asked for the large vases were from fifty to eighty Spanish dollars.

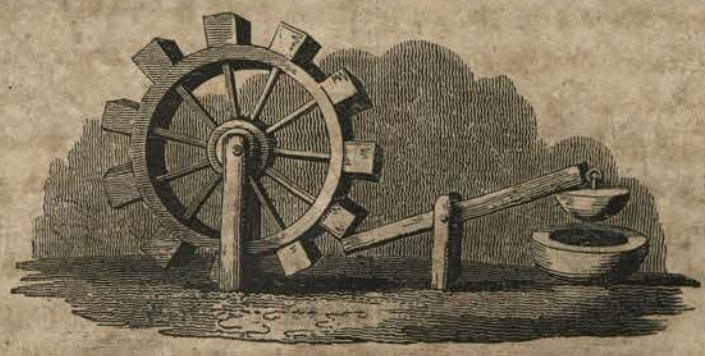
A fire broke out in the suburbs whilst we remained at this city; which, although it raged at first with great violence, in the midst of houses, built chiefly of wood, was speedily extinguished. Two engines, brought over as a present to the Emperor, were offered by His Excellency to the legate on the occasion, but were refused. Our senses, indeed, soon informed us that they were not required. Although our boats were anchored on the opposite side of the river, we could distinctly see water pouring in streams upon the flames; but had no opportunity of seeing the machines which raised it.

Leaving Nan-chang-foo on the 27th, the Embassy re-commenced their route, and entered a country highly ornamented with useful and beautiful plants. Of these the species of *Camellia*, which produces much of the oil consumed by the Chinese, was the most remarkable. Its figure given in the next page, will convey a correct notion of its appearance to the general reader. This beautiful shrub, which I have called *Camellia oleifera*, is the *Tcha-Yeou* of the Chinese;

façon singulière, on y ait donné quelque attention, et qu'on en ait fait usage ensuite pour imaginer une nouvelle façon de porcelaine.

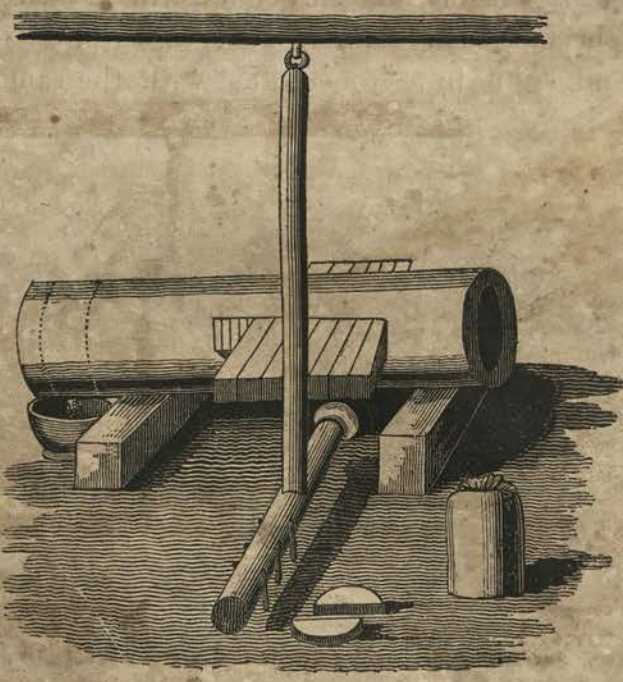
which might be translated, "the oil-bearing tea plant;" a very expressive name, as the plant, in general appearance, closely resembles the tea, and yields oil. It was brought into this country by the former Embassy, and considered as the *Camellia sesanqua* of authors, from which, however, I apprehend it is very distinct.* We sometimes found it of the magnitude of a moderate sized cherry-tree, and always that of a large shrub, from six to eight feet in height, and bearing a profusion of large single white blossoms. This circumstance gave an interesting and novel character to the places which it covered. They often looked in the distance, as if lightly clothed with snow; but on a nearer view, exhibited one immense garden.

The *Camellia oleifera* seems to flourish best in a red sandy soil, on which few other plants will grow. The Chinese cultivate it in large plantations, and procure from its seed a pure esculent oil by a very easy process. The seeds are first reduced to a coarse powder by one of several methods. Sometimes they are pounded in a large mortar, by a weight at the end of a lever, acted upon by the cogs of a water-wheel. At others, they are crushed by a horizontal wheel, having small perpendicular wheels, shod with iron, fixed to its circumference, and acting in a groove lined with the same metal.



* See Appendix.

When sufficiently ground, they are put into bags and boiled, or rather stewed, a short time, in a vessel containing a small quantity of water; and are then transferred to a press, where they yield the oil. This press is of very rude construction. It consists of the hollowed trunk of a tree open at one end, and having two square holes mortised in its sides, opposite each other. It is so supported that the open end is higher than the other. When the oil is to be expressed, one of the bags is put into the trunk, and pushed back to its depressed end. Semicircular pieces of wood are then introduced through the mortices on each side, and meeting, form a circle, which is equal to the circumference of the hollow. Several of these are successively introduced, and fill up the interval between the bag and the mortices, and some space beyond, as shown in the figure. They are then driven back with great force upon the seed, by the means of bars and wedges of wood forced in by an immense hammer in the form of a battering ram. The oil runs from the press through a small opening in its depressed end.



The tree producing tallow, *Croton sebiferum* of Linnæus, was one of the largest, the most beautiful, and the most widely diffused, of the plants found by us in China. We first met with it a few miles south of Nankin, and continued to remark it, in greater or less abundance, till our arrival at Canton.* We often saw it, imitating the oak in the height of its stem and the spread of its branches. Its foliage has the green and lustre of the laurel. Its small flowers, of a yellow colour, are borne at the ends of its terminal branches. Clusters of dark coloured seed vessels succeed them in autumn; and, when matured, burst asunder and disclose seeds of a delicate whiteness.

The fruit of the tallow tree goes through nearly the same process in yielding its extract as the seed of the oil plant. The machine in which it was seen to be bruised, differed indeed from those employed for pounding the seed of the *Camellia;* but was, no doubt, often used for both purposes. It was ground by a wheel moved backwards and forwards in a trunk of a tree, shaped like a canoe, lined with iron, and fixed in the ground. To the axis of the wheel was fixed a long pole, laden with a heavy weight, and suspended from a beam, in the way illustrated by the wood engraving.

* The tallow tree has many names in China; amongst others, Ya-Rieou, because crows are fond of its fruit; *Ya* being the character which signifies a crow; the other

The seed, after being pounded, was formed into a thick mass, by heating it with a small quantity of water in a large iron vessel. It was then put hot into a case formed to receive it. This consisted of four or five broad iron hoops, piled one over the other, and lined with straw. The seed was pressed down with the feet, as close as possible, till it filled the case, which was then transferred to the press.

Pressure, however, is not the only, or, perhaps, the most common method of obtaining the tallow; for it is sometimes procured by boiling the bruised seed in water, and collecting the oily matter which floats on its surface. This tallow, which has all the sensible properties of that from the animal kingdom, is used in the manufacture of candles. Du Halde informs us, that every ten pounds is mixed with three of some vegetable oil, and a sufficient quantity of wax to give it consistence. The candles also receive additional support from a coating of wax. They burn with great flame, emit much smoke, and quickly consume.

In giving some account of the magnificent plants which often adorned the banks of the river, during our progress through the southern provinces of China, I must not omit to mention the camphor tree, *Laurus camphora*, growing to the size of our largest elms or oaks, in the provinces of Kiang-si and Canton. The Chinese affirm that it sometimes attains the height of more than three hundred feet, and a circumference greater than can be embraced by the extended arms of twenty men.* We saw no instance of its magnitude that at all justified this description. The largest that was measured by the persons of the Embassy was twenty feet in circumference, and about fifty feet high, and was chiefly remarkable for the size of its branches; many of them being nine feet in circumference.

The camphor obtained from this tree is less valued by the Chinese

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character, *Rieou*, signifies a mortar for separating the husk from rice, and enters into its name, because when the tree grows old, its root decays within, and becomes hollowed in the form of a mortar.—Du Halde, tom. iii. p. 504.

* Lettres Edifiantes, tome xxii. p. 192.

than that which they procure from Borneo. This preference probably depends on the adulteration of the article by the Chinese manufacturer, since the mode of refining it is well known. The process pursued in many respects resembles that used in Japan*, and has been described by the Père d'Entrecolles†. Fresh gathered branches of the tree having been steeped for two or three days in water, are then boiled in a proper vessel, being the whole time continually stirred about with a stick, till the gum begins to adhere to it in the form of a white jelly. The fluid is then poured off into a glazed vessel, and after being at rest for some hours, is found concreted. The crude camphor is then purified in the following manner. A quantity of the finely powdered materials of some old wall, built of earth, is put as a first layer at the bottom of a copper basin; on this is placed a layer of camphor, and then another of earth, and so on till the vessel is nearly filled; the series being terminated with a layer of earth. Over this is laid a covering of the leaves of the plant *Po-ho*, perhaps a species of *Mentha*. A second basin is now inverted over the first, and luted on. The whole, thus prepared, is put over a regulated fire, and submitted to its action for a certain length of time; it is then removed and suffered to cool. The camphor is found to have sublimed, and to be attached to the upper basin. It is further refined by repetitions of the same process.

Besides the *Laurus camphora*, I found another species of laurel highly impregnated with the pungency and flavour of the gum, and which is probably used by the Chinese for its extraction. It so nearly resembled its congener when growing, as to require a close examination to distinguish. It is, however, distinctly separated by the form of its leaves and the distribution of their nerves. The camphor tree is

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* Lettres Edifiantes, tome xxii.

† "Extractio camphoræ rusticorum opus est in provinciâ Satzuma et insulis Gotho, qui radices et ligna in festucas comminuta, cum affusâ aquâ coquunt in vesicâ ferreâ, impositoque capitello fictili amplo, et (ne ex vapore rumpat) rostrato, sublimatam resinam, excipiunt, stramini quod capitellum repletat, adherentem." Amœnit. Exotic. p. 772.

one of the principal timber trees of China, being used in building, and in the fabrication of articles of furniture.

A species of *Ficus**, called *Yung-shoo* by the Chinese, much resembling the banyan in habit, grew very commonly in sandy soil on the banks of rivers from the Po-yang lake to the mountain of Mei-ling. Its form gave a singularly grotesque character to the scenery. Its trunk is made up of a series of small stems always close together. Its branches are wide and straggling, but scarcely overshadow its arching roots rising above the soil and covering a considerable space of ground.

But although the land on both sides the river was favourable to the growth of many beautiful and useful plants, it was seldom very productive in any of those which afford the essential vegetable support of mankind. Between the Po-yang lake and the Mei-ling mountain, the quantity of land cultivated in corn bore no proportion to that which was entirely barren or covered with plantations of Camellia.

We proceeded on our route up the Kan-Keang, whose stream was clear as crystal, without meeting with any circumstance worth noticing till the 6th of December. On that day the boatmen sent a petition to the Ambassador, requesting a pecuniary gratuity to enable them to perform the usual rites before passing the She-pa-tan or eighteen cataracts, an appellation little applicable to what are only rocky shoals in the bed of the river. We had great difficulty indeed, but little danger in passing them, not even the most perilous, called Tien-san-tan, or the pillars of heaven.

The rocks forming the shoals, when first met with, were of granite, and afterwards of a dark-coloured compact schistus much resembling the killas of Cornwall. The river seemed to have worn away the superincumbent formation of sandstone, which narrowed the channel of the river into a mere ravine, and to have been checked in its de-

* It is very closely allied in the outline of its leaves to *Ficus benjamina* of Wildenow, but differs from it in a less equal distribution of their nerves, and in wanting the white prominent spots on their upper surface.

grading process by the harder rocks. The soil on the surface in this part of our route was generally of a dark red, and seemed peculiarly favourable to the growth of pines. Large plantations of these covered the hills in the neighbourhood of See-chou, where we anchored on the 8th of December.

The *Pinus Massoniana* of Mr. Lambert still continued to be the most general species of fir, but was occasionally mingled with the *Pinus lanceolata* of the same author. We usually found this last tree a young and flourishing plant, seldom more than eight or ten feet high, rarely reaching to twenty or thirty. Here also we gathered the tea-plant, apparently in its native habitat, near no plantation. It was a small shrub of what has commonly been considered the green variety. The *Dryandra cordata* of Thunberg, *Tong-choo* of the Chinese, grew in the same place. From the seeds of this plant the Chinese extract an oil which they use as a varnish for their boats and coarser articles of furniture. They often mix it with the more valuable varnish obtained from a species of *Rhus*, and sell the compound as the superior article. I did not see the true varnish tree growing, but judging from specimens brought to me by my friends, have little doubt of its being an undescribed species of *Rhus*, and not the *Rhus vernix*. In the remainder of our route through the province of Kiang-si, the most striking productions of the soil were those which I have already described; but every day brought me some new and very rare species of smaller plants. Of these, a new species of *Eugenia*, which as it is perhaps the smallest of its genus, has been named *Eugenia microphylla*, covered the declivities of almost every hill in the province of Kiang-si. It is a very elegant plant, strongly resembling a myrtle, and grows to the height of one or two feet.* It bears thick terminal clusters of dark purple berries, which were eaten by our Chinese attendants.

On the 18th the Embassy reached the city of Nan-gan-foo, situated at the northern base of the Mei-ling mountain. This city differed

* See Appendix.

in no respect from many others which we had visited. Its environs were picturesque from the mountain ranges, which formed a magnificent amphitheatre around them.* These were too distant to be approached in any of our limited excursions. Our curiosity was therefore obliged to rest satisfied till we crossed the Mei-ling mountain, which formed the centre of a ridge that swept from east to west, bounding and separating the provinces of Kiang-si and Canton.

The rocks in the neighbourhood of the city were nearly horizontally stratified, and consisted of shistus of a very close texture, and dark gray colour. Similar rocks had formed the immediate banks of the river for several days before our arrival. The hills were rich in rare and beautiful plants, of which I can only name the *Eurya Japonica** of Thunberg, which covered them in the greatest profusion.

Much of the cultivation about Nan-gan-foo was in the ground-nut *Arachis hypogæa.* This plant, so remarkable for its wide geographical distribution†, is cultivated by the Chinese for the oil extracted from its seeds, and for the nourishment they afford to the common people as a fruit and a vegetable. We had been supplied with them in all parts of our route, but first met with the plant cultivated in fields on the banks of the Yang-tse-kiang, and continued to observe it through the whole province of Kiang-si and of Canton. Before the seeds, which ripen under ground, are collected, the stems of the plant are cut by a hoe close to the earth. The seeds are then taken up and put into a large sieve, suspended between three poles set up in a triangle: one man feeds the sieve, whilst another shakes it, and separates the dirt. It what manner the oil is procured from the seeds we had no opportunity of learning. They are roasted before

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* See Appendix.

† Of this plant, which was found cultivated along the banks of the Congo as far as they were examined by Capt. Tuckey, Mr. Brown has observed, "There is nothing very improbable in the supposition of *Arachis hypogæa* being indigenous to Asia, Africa, and even Armenia; but if it be considered as belonging to one of those continents only, it is more likely to have been brought from China through India to Africa, than to have been carried in the opposite direction."—Botanical Appendix of Capt. Tuckey's Journal of the Expedition to explore the Congo.

they are eaten as fruit. A Canton linguist who attended the Embassy, took some pains to teach me their mode of growth, and seemed quite aware that they were not the roots of the plant, but had been part of the flower. The *Arachis hypogœa* bears in China from two to four seeds in each capsule.

We quitted our boats at Nan-gan-foo for a short land journey across the Mei-ling mountain, computed to be a thousand feet above the level of the plain whence we ascended.

Chairs and horses being provided for our conveyance, we set out early on the morning of the 20th. Having passed through a cultivated flat of some extent, we began about an hour after leaving the city, to ascend the acclivity of the mountain. It soon became very steep, but was rendered practicable by a paved road that wound over it, and which in the most difficult part was formed into broad and gentle steps. Groves of fir trees skirted our way, forming in some places vistas, through which we overlooked the surrounding country: a valley of great extent was bounded by lofty mountains. The scene derived its chief interest from its moving objects. Looking back on the road we had passed, we saw a long train of chairs, horsemen, and porters, winding up the steep. Forwards the road narrowed in a defile, leading through the mountain, and near its termination became so precipitous as to oblige the horsemen to dismount. Our steeds were small, but spirited and powerful, and climbed with great perseverance and effect. The bearers of the sedans moved with a quickness and apparent ease which surprised me. Four carried each of the chairs of the principal mandarins who attended us, and moved in measured but quick time, in an oblique direction, avoiding the direct steepness of the path. The soldiers who accompanied us were equally active. Many of them were fine athletic men, and would in themselves have induced me to think well of the physical efficiency of the military in China. One attended each of the gentlemen who were on horseback, and kept up with him at whatever pace he rode, without giving any signs of fatigue.

In our way we overtook a herd of porters transporting the presents

which had been intended for the Emperor, and were highly amused at their ridiculous care of two fire engines, which they supported by the assistance of poles a few inches from the ground. When, by any chance, the wheels of these machines, sanctified by their first destination, touched the earth, a loud shout from the bearers testified their alarm lest they should have been injured by the shock.

Arrived on the summit, we entered a narrow pass cut through the solid rock, a work only to be accomplished at the expense of great time and difficulty. The rock is argillaceous sandstone of a compact structure. The narrowest part of the ridge had probably been chosen to cut through, as it did not appear to be more than forty or fifty feet in length, and might be as many in height, and half as many in width.

The pass was formed during the dynasty Tang, about a thousand years ago, by a private individual. An arched gateway stands in the centre, marking the boundary between the provinces of Kiang-si and Quang-tong. Mr. Morrison decyphered several inscriptions cut on the sides of the rock. One of these Teen-le-jin-tsing, "Heavenly principles and humane feelings," probably applied to the man who formed the pass, and was engraved in very large characters. Near the entrance to the pass on the Canton side, we saw a species of *Prunus* in full flower, called by the Chinese Mei-hwa-shoo, "Mei flower-tree." Hence the name of the mountain, Mei-ling, signifying the mountain of the mey-flower.

The top of the mountain is distinctly and horizontally stratified, but is divided into stair-like masses. The sandstone is small grained; in its fresh fracture has almost the dark gray colour of clay slate, but where it is exposed to weather is reddish.

We descended by a very steep declivity on the southern side of the mountain, into an extensive plain. The scene was wild and strange. Innumerable "rocks piled on rocks as if by magic spell," of forms too fantastic for language to paint, covered its surface and every where bounded the view. Immense square blocks, seemingly piled on each other by art and rising to a great height, gave to some a castellated, to

others a pyramidal form. Worn by the action of the elements, their surface had become vesicular, and their angles, from the same cause, often represented the most grotesque profile. They presented forms, indeed, so at variance with any which I had ever before seen, that I could not help suspecting that their composition would be found equally peculiar. But they proved, on examination, to be a very fine granular, approaching to compact limestone. Of their internal colour, for they were covered externally with lichens, I can make no positive mention, as I have not recovered any of the specimens to which I have referred for this character in my journal; but judging from others collected in their neighbourhood, and probably of the same formation, I have little doubt that it is reddish gray. The distinct blocks of which they were composed seemed to be the remains of a horizontal stratification.

The lower plate of the geological views in China is given rather with a view to assist the description, than as approaching to an accurate representation of these rocks: it would have been hopeless to have attempted an imitation of their varied shapes. These rocks are quarried for limestone. Kilns for burning it were interspersed amongst them; and seen smoking in all directions, increased the singularity of the scene.

Following the course of a small stream which rose in the Mei-ling mountain and flowed through the valley, we arrived at the small village of Choong-chun about half way on our journey from Nan-kan-foo. At this place we found refreshment prepared for us at a comfortable house. I here found myself too fatigued with the first strong exercise that I had taken since my illness, to continue my journey on horseback. A mandarin who accompanied us saw my situation, and immediately procured me a chair. The horse was put in charge of a soldier, who was directed to follow me, that I might re-mount in any part of the road for the sake of examining the country. This man proved a true Chinese. He mounted the horse, and having gradually fallen back out of reach of our observation, rode off, and no more appeared.

There was nothing very remarkable in the village of Choong-chun. It consisted of a long narrow street of sheds, for the accommodation of the coolies employed in transporting goods across the mountain, and of the usual proportion of public houses of retirement.

Leaving this place, we entered an extensive undulated plain, dreary and barren, and in about four hours reached the suburbs of Nan-hiung-foo. Within a short distance of the city we fell in with a large body of military, who exhibited a solitary instance of something martial in China, even to the eyes of Europeans.

I have not given any account of the different military posts which we passed in our progress through China, because details of this kind may be found in various authors, and because they afforded me no opportunity of estimating the probable amount of the military force of the empire. I may, however, hazard the general observation, that in discipline and costume the Chinese soldiers seemed better adapted to grace the representations of a theatre, and in many instances a mountebank stage, than for the defence of the empire. This observation, indeed, applied less to the body of men who waited the arrival of the British Ambassador, at the suburbs of Nan-hiung-foo, than to any other that we had seen in China. They were generally fine athletic men, and had a soldier's port. Their arms and uniform were simple, clean, and effective. The cavalry, whom I saw dismounted, were armed with bows and arrows, and wore white linen jackets faced with red. The infantry, armed with match-locks supported on cross sticks, wore red, faced with white. But however complete the appointment of Chinese soldiers, they lose all their imposing character in the eyes of a European during their degrading salute to an officer of rank. Let my reader imagine a whole regiment in line, at the word of command, clapping their hands to their sides, falling upon their knees, and uttering a dismal howl, and he will have some idea of this august ceremony.

On approaching the city we passed through a succession of tri-

umphal arches* ornamented in the Chinese taste, with various colours. The city proved of great extent, and as far as a passing observation could enable me to form an opinion, was more populous and better built than any that I had seen on the northern side of Mei-ling. Our Chinese conductors, to impress us with its extent, led us through every street, that could be traversed in our way to the building prepared for our reception. I saw nothing, however, to change the opinion that all Chinese cities are built on the same plan, and that having seen one, a tolerably accurate notion may be formed of all the others. Du Halde has made the same observation, and was so convinced of its correctness as to give, in his History of China, only one general description of a Chinese city. The picture that he has drawn, although highly coloured with regard to beautiful temples and monuments dedicated to the brave and good, is in all other respects so accordant with our experience, that I give it to the reader as a very accurate painting.

" † The cities of China are generally of a square form, surrounded with lofty walls having projecting towers at regular intervals, and

* The most common of these more resemble a gallows, than any other fabric to which I can compare them.

† Elles sont la plûpart de figure quarrée, lorsque le terrain le comporte, et environnées de hautes murailles, avec des tours d'espace en espace qui y sont adossées: elles ont quelquefois des fossez, ou secs ou pleins d'eau. On y voit d'autres tours ou rondes, ou hexagones, ou octogones, qui ont jusqu'à huit ou neuf étages, des arcs de triomphe dans les ruës, d'assez beaux temples consacrez aux idoles, ou des monumens érigez en l'honneur des héros de la nation, et de ceux qui ont rendu quelque service important à l'état et au bien des peuples; enfin quelques edifices publics plus remarquables par leur vaste étendue, que par leur magnificence. Ajoutez à cela quelques places assez grandes, de longues ruës, les unes fort larges, et les autres assez étroites, bordées de maisons à rês de chaussée ou d'un seul étage. On y voit des boutiques ornées des porcelaines, de soye et de vernis: devant la porte de chaque boutique est un piédestal sur lequel est posée une planche haute de sept à huit pieds, peinte ou dorée; l'on y voit écrit trois gros caractéres, que le marchand a choisi pour l'enseigne de sa boutique et qui la distinguent de toutes les autres: on y lit quelquefois deux ou trois sortes de marchandise qui s'y trouvent, et enfin au bas on voit son nom avec ces mots *Pou-hou*, c'est à dire, il ne vous trompera point. Ce double rang d'espaces de pilastres placez à égale distance, forme un colonnade, dont la perspective est assez agréable. Du Halde, tome i. p. 107.

are usually encompassed by a ditch either dry or full of water. Distributed through the streets and squares, or situated in the vicinity of the principal gates, are round, hexagonal, or octagonal towers of unequal height, triumphal arches, beautiful temples dedicated to idols, and monuments erected in honour of the heroes of the nation, or of those who have rendered important benefits to the state or to the people; and lastly, some public buildings more remarkable for extent than magnificence. The squares are large, the streets long and of variable breadth, some wide, others narrow; the houses have for the most part but a ground floor, and rarely exceed one story. The shops are varnished, and ornamented with silk and porcelain. Before each door is fixed a painted and gilded board seven or eight feet high, supported on a pedestal, and having inscribed on it three large characters chosen by the merchant for the sign of his shop, and distinguishing it from all others. To these are often added a list of the articles to be disposed of, and the name of the seller. Under all, and conspicuous by their size, are the characters *Pou-hou*, 'No cheating here.'"*

Such is Du Halde's description of a Chinese city, and the notion it conveys of the distribution of the temples, streets, and shops, will answer for the greater number of cities in the empire. The modifications are not many, and depend on mere localities. Thus, where stone is readily had, the streets are paved much in the manner of European cities; but in Tong-Chow, built on an alluvial soil remarkably free from all stones, the streets are without pavement, and cut into deep ruts. Another peculiarity of certain Chinese cities, is the quantity of land included and cultivated within the walls.

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* A writer not very favourable to the Chinese has observed, that unless they were predetermined to cheat they would not place these characters before their shops. "Il ne reste donc après tout ceci que l'extreme bonne-foi des marchands Chinois, qui sont assurément de grands moralistes; puisqu'ils écrivent à l'entrée de toutes leurs boutiques, *Pou-hou*, c'est-à-dire, 'ici on ne trompe personne.' Ce qu'ils n'auroient point pensé à écrire, s'ils n'avoient été très résolus d'avance de tromper tout le monde." De Pauw sur les Chinois, tom. i. p. 9 et 10.

Common to many, not mentioned in Du Halde, but described by Mr. Barow, are the screens thrown across the streets from house to house, affording to the passengers shelter from the sun and rain.

In passing through Nan-hiung-foo, we met with many indications of our arrival in a province where we were known as Hung-mous, or Englishmen, a people looked upon as very little removed from barbarism by the Chinese of Canton. Some of the gentlemen, in riding through the city, were saluted by the mob with the appellation of Fan-qui, or foreign devils, and were much pressed by the crowd. It was in vain to attempt to escape them by hard riding, as every part of the street was filled with people, and those who ran behind cheered and kept up with their game. One or two gentlemen could not quietly endure their insults, but turning their horses, charged into the mob. They at once fled in all directions, and although they did not cease their abuse, kept at a more tolerable distance.

The boats in readiness to receive us at this place, with the exception of those for the commissioners, were, in the state in which we found them, too comfortless to be taken possession of. They had no covering but mats, were open from stem to stern, and were so low that it was impossible to move in them but with the body bent at right angles. Their holds, full of water, were only separated from the cabin by an open bamboo railing. I must confess, that being threatened with a return of my illness in consequence of the fatigue of the journey across the mountain, I shuddered at such accommodation, but was saved from its probable consequences by the kindness of Mr. Ellis, who gave me a share of his boat. The other gentlemen with great difficulty, and reiterated representations to the local authorities, obtained partitions to separate them from the boatmen. These trivial embarrassments encountered by travellers as a necessary consequence of the habits of the country, would have been quietly endured; but in China, where we saw the means of better accommodation at hand, where it was withheld from us by the local authorities from their contempt of our national character, such barefaced

neglect of the common offices of hospitality was in the highest degree irritating.

We went on board on the evening of the 21st, intending to sail at an early hour the next morning.

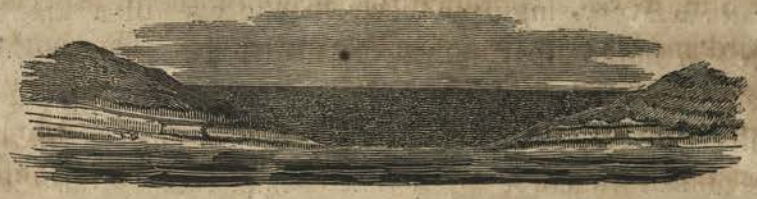
On the morning of the 22d, some time after the Legate had got under weigh, and when the boats of the Embassy were preparing to follow him, it was ascertained that many of them, especially those of the guard and band, had received no provisions. The commissioners becoming acquainted with this circumstance, peremptorily ordered their boatmen to anchor. His Excellency sent word to the necessary authorities that he would not again move till he received information from each boat that it was properly supplied, but would then give the signal for departure. This decision brought the Chinese to a due sense of propriety. They rapidly sent down every thing that was required, but it was two in the afternoon before they had provisioned all the boats. The Ambassador then ordered his boatmen to weigh, and was followed by the whole fleet.

Many of the boatmen on this occasion, opposed in a determined manner the order for halting, by persisting to pole along their boats, but were brought to obedience by a demonstration of personal opposition.

The extreme shallowness of the river prevented our making much progress during the first two days after leaving Nang-hiung-foo; but the forms and structure of the mountains between which we were passing, rendered the voyage very interesting. During the 22d, they were at too great a distance to admit any conjecture respecting their composition during our passage, or of a visit to them during the short continuance of day-light after the anchoring of the boats in the evening.

During our second day's progress, the hills which formed the banks of the river exhibited a breccial formation at their base, covered with beds of ferruginous clay, giving to the soil, through a great extent of country, a remarkable redness. Bricks were making of this, in kilns spread over its surface, which came from the furnace of a bluish colour. I have found the same effect to be produced on small

quantities of it, subjected to the heat of a common stove. Towards evening we occasionally passed rocks in an undecomposed state, that exhibited the same colour as the beds of clay. Their strata were sometimes inclined, and had beds of fine gravel interposed between them.



On anchoring in the evening, I examined some rocks similar to those by which we had passed, and found that they changed their red colour beneath the surface, and became of a bluish gray. When disintegrated, they formed the clay soil before mentioned.

These rocks, which near the surface might be said to be composed of argillaceous sand-stone of a coarse grain, passed lower down into pudding stone, containing rounded fragments of quartz and decomposed crystals of felspar.

On the 24th the country improved in appearance; the rocks which had the day before been uniformly bare, were now clothed with groves of pine. Large rafts of its timber were floating down the stream. In a memorandum attached to a drawing of the *Pinus lanceolata* at the India House, it is stated that the rafts of timber floated down to Canton are formed of this tree. This, I apprehend, is an error. We never found the *Pinus lanceolata* in groves, but scattered amongst the *Pinus Massoniana;* and, as I have before mentioned, generally of a small size. The rafts which we saw both on the northern and southern side of Mei-ling were certainly formed chiefly of the former plant. I use the qualification chiefly, because I am not quite certain that another pine, allied to the *Pinus paludosus*, does not sometimes occur in the groves. The botanic gardener thought so, but did not satisfy me of the fact by any specimens. All the groves I saw in China were of the *Pinus Masso-*

niana, a specimen of which I have recovered through Sir George Staunton, and have examined others in the Herbarium of Sir Joseph Banks, brought over by Lord Macartney from the province of Kiang-nan. This tree, it would appear, is one of the most widely diffused plants on the continent of China. We met with it through more than ten degrees of north latitude and six of east longitude.

The rafts are very singular objects in the eyes of a stranger, consisting of an indefinite number of smaller rafts, fastened together and covered with the dwellings of their managers. The smaller rafts are usually ten feet wide, and five above the surface of the water. They are joined together by twisted osiers, and thus extend, as affirmed by Du Halde and other writers, to more than a mile in length, and are numerous in proportion as the timber-merchant is rich, and are so connected that they move as easily as the links of a chain. Four or five men guide them before with poles and oars, and others assist along the sides, at equal distances. They live in wooden houses, and sell their dwellings at the different cities where they sell the timber; but sometimes, it is said, they navigate a hundred leagues in transporting it to Pekin.

When the boats anchored in the evening, I again examined the rocks in our neighbourhood, and found them composed of red sandstone of a finer grain than those I have before described. One of them was remarkable for a vein of pudding stone, composed of quartz, pebbles, and the shift which is represented in the sketch.

The next morning I rose early, in the hope of viewing some strange shaped rocks seen at a distance the preceding evening, and was not disappointed. The forms of those which now skirted both banks of the river, partaking largely of the usual grotesque characters of mountain scenery in China, were too numerous to admit any detailed description. Much of the singularity of the scenery, however, was occasioned by very rugged rocks contrasting with others of an uninterrupted surface. Limestone rocks, apparently made up of immense masses heaped confusedly together, were often opposed to others of sandstone, rising with an extensive and even front to a great elevation. Occasionally they formed a channel for the river, so winding and narrow, that they seemed to terminate its course.

Amidst this interesting scenery a marbled rock on the right bank, rising perpendicularly from the surface of the water to the height of two or three hundred feet, particularly arrested my attention. I call it a marbled rock, because its surface was of a fine red colour, covered in places with a stalactitic incrustation of a delicate whiteness. I landed at its foot, and found it resting on a breccia formed of fragments of grey compact limestone, of a calcareous red sandstone, and of rounded fragments of quartz, cemented by a fine grained red and white limestone. Many of the fragments of limestone had the same characters as the rocks in the valley of Mei-ling, and were, perhaps, derived from them. The breccia rose only a few feet above the water. The principal mass of rock resting upon it exhibited no stratification, but appeared to be one entire mass of fine-grained flesh-red granular limestone.

Further down the river we passed other rocks of a breccial character, but having their component parts on so large a scale, that they could be distinguished at a considerable distance. When close to us, many of the fragments appeared to be from forty to sixty feet square, and generally had defined edges and angles: the fragments were of a gray, the connecting medium of a red colour. I have endeavoured to represent their general aspect in the upper

plate of the geological views in China. The surfaces of many of these rocks could not have appeared more bare, even, and perpendicular, had they been formed by the hand of art.

The vegetation on the surface of the hills least decomposed sometimes consisted of a species of *Lycopodium* resembling a tree in miniature. An exaggerated figure is given of this plant in number two hundred and thirty-eight of the botanical drawings in the India House. The head is not so thick as is there represented, but is more umbrella-shaped, and spreading.

A few miles before we reached Chaou-chou-foo the banks of the river became lower, and resumed the red colour arising from disintegrated red sandstone, and were in some places of a blackish hue. This last circumstance arose from a quantity of coal which we here found rising through the surface. Some pits* of coal had been met with by some of the Embassy soon after leaving the Po-yang lake, but I had not been well enough to examine them. However, I received sufficient evidences of coal being abundant in the empire, and of various qualities, in the large supplies of it furnished to our boats, and exposed for sale in different cities that we visited.† The coal which I saw in the province of Pe-tche-lee was a species of graphite; that brought to me from the towns on the Yang-tse-kiang, resembled cannel coal; that observed after passing the Po-yang lake had the characters of kovey coal; that now met with, contained much sulphur.

The last-mentioned coal was used in the manufacture of sulphate of iron, in the neighbourhood of Chaou-chou-foo. The following pro-

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* "Foo-hoo-tang appearing an insignificant village, we took a short walk into the country, where we met with some pits of coal that had been sunk like wells; the fragments at the bottom of the hill where they were situated appeared pure slate."—Ellis's Embassy, vol. ii. p. 107.

† "The Missionaries inform us that coal mines are so abundant in every province of China, that there is, perhaps, no country of the world in which they are so common." See Grosier's Account of China, vol. i. p. 402.

cess, in its different stages, was witnessed by several gentlemen of the Embassy. A quantity of hepatic iron pyrites, in very small pieces, mixed with about an equal quantity of the coal in the same state, being formed into a heap, was covered with a coating of lime-plaster. In a short time great action took place in the mass, accompanied by the extrication of much heat and smoke, and was allowed to go on till it spontaneously ceased. The heap was then broken up and put into water, which was afterwards boiled till considerably reduced in quantity, and was then evaporated in shallow vessels. Very pure crystals of sulphate of iron were obtained at the close of the process.

We reached Chaou-chou-foo at four o'clock in the afternoon of the 25th, and anchored on the left of the river: the city is on the right bank, and communicates with the left by a bridge of boats. Here again we were made sensible of our approach to Canton by being prohibited from entering the city. Two or three gentlemen, however, succeeded in reaching it, but found nothing peculiar in the style of its buildings. I also made an attempt, but was less fortunate than my companions. The morning after our arrival, seeing a number of people passing over the bridge, I hoped, by mingling with them, to succeed in crossing the river, but found, on approaching the middle of the bridge, that the central boat had been withdrawn. In the hope that it would be replaced, I sat down on the side of the next, and was soon surrounded by a crowd delayed by the same circumstance, but who were not permitted to pass till they had driven me away by their usual importunate curiosity. I now went to a Canton linguist who attended the Embassy, and requested him to procure me a boat, promising not to enter the city, but to confine my visit to a singularly shaped black rock in its vicinity. After a little hesitation he seemingly assented, and ordered a boat to receive me, but gave the boatmen some directions in Chinese which I did not understand. I soon, however, discovered their import, for when the boatmen had taken me two or three hundred yards up the river, they endeavoured to land me on the same side that I had left. It being in vain to expos-

tulate, I returned to the linguist, not a little incensed at the trick he had played me. He received my complaint very coolly, and frankly replied that it had been necessary to get rid of me, as I gave him "too much a trump," the Canton-English for too much trouble.

At Chaou-chou-foo the uncomfortable matted boats were changed for others which were large, commodious, and handsome. We entered them in high spirits on the morning of the 27th, hoping in a few days to be clear of a people whose character rarely presented itself in any amiable light.

Having passed, during the first day, through a country exhibiting no characters worth noting, the Embassy halted on the morning of the 28th before a temple built in the fissure of a rock, and which is represented, as it appeared when close to us, in the annexed engraving.

With our imaginations warmed by its beautiful and romantic description* by an elegant writer, we were surprised at landing on a

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* Those of my readers who have not before read the following description, will thank me for its insertion, although it occupies a long note.

"Before we had proceeded many hundred yards we were attracted to the left by an arm of the river, which, after stretching considerably from the main stream, had bent and elbowed itself into a deep cove or basin, above which enormous masses of rock rose abruptly on every side, agglomerating to a stupendous height, and menacing collision. The included flood was motionless, silent, sullen, black. The ledge where we landed was so narrow, that we could not stand upon it without difficulty; we were hemmed round with danger. The mountains frowned on us from on high; the precipices startled us from beneath. Our own safety seemed even in the jaws of a cavern that yawned in our front. We plunged into it without hesitating, and, for a moment, felt the joys of a sudden escape: but our terrors returned when we surveyed our asylum. We found ourselves at the bottom of a staircase hewn in the rock, long, narrow, steep, and rugged. At a distance a feeble taper glimmered from above, and faintly discovered to us the secrets of the vault. We, however, looked forward to it as our pole star; we scrambled up the steps, and with much trouble and fatigue arrived at the landing-place. Here an ancient bald-headed Bonze issued from his den, and offered himself as our conductor through this subterranean labyrinth. The first place he led us to was the grand hall or refectory of the convent. It is an excavation forming nearly a cube of twenty-five feet, through one face of which is a considerable opening that looks over the water, and is barricadoed with a rail. This apartment is well furnished in the taste of the country with tables and chairs highly varnished, and with many gauze and paper lanthorns of various colours, in the middle of

Engraved by T.Fielding.

THE TEMPLE OF QUONG YING.

Published by Longman, Hurst, Rees, Orme & Brown, London, Oct.1.1817.

broad platform, a few feet above the water, and at ascending by an easy flight of steps to the first division of the temple; an ample cavern, cold, dark, and dismal. A few grinning bonzes, with bare heads and long cloaks, received us at the entrance, and conducted us through the vault up another flight of steps to the second story. Here we again looked round on the bare rock projecting abruptly into a capacious but gloomy apartment. At an opening in its front

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which was suspended a glass lanthorn of prodigious size made in London, the offering of an opulent Chinese bigot at Canton. From hence we mounted by an ascent of many difficult steps to the temple itself, which is directly over the hall, but of much greater extent. Here the god Pusa is displayed in all his glory, a gigantic image with a Saracen face, grinning horribly from a double row of gilded fangs, a crown upon his head, a naked cimetar in one hand, and a firebrand in the other. But how little, alas! is celestial or sublunary fame; I could learn very few particulars of this colossal divinity: even the Bonzes, who live by his worship, scarcely knew any thing of his history. From the attributes he is armed with, I suppose he was some great Tartar prince or commander of antiquity; but if he bore any resemblance to his representative, he must have been a most formidable warrior, and probably not inferior in his day to the king of Prussia or prince Ferdinand in our own. A magnificent altar was dressed out at his feet, with lamps, lanthorns, candles and candlesticks, censers and perfumes, strongly resembling the decorations of a Romish chapel, and on the walls were hung numerous tablets inscribed in large characters, with moral sentences and exhortations to pious alms and religion.

"Opposite to the image is a wide breach in the wall, down from which the perpendicular view requires the firmest nerves and the steadiest head to resist its impression. The convulsed rocks above shooting their tottering shadows into the distant light, the slumbering abyss below, the superstitious gloom brooding upon the whole, all conspired to strike the mind with accumulated horror and the most terrifying images. From the chapel we were led through several long and narrow galleries to the rest of the apartments, which had been all wrought in the rock, by invincible labor and perseverance, into kitchens, cells, cellars, and other recesses of various kinds. The Bonzes having now heard the quality of their visitors, had lighted an additional number of torches and flambeaux, by which we were enabled to see all the interior of the souterrain, and to examine into the nature of its inhabitants, and their manner of living in it. Here we beheld a number of our fellow creatures endowed with faculties like our own, ("some breasts once pregnant with celestial fire") buried under a mountain, and chained to a rock to be incessantly gnawed by the vultures of superstition and fanaticism. Their condition appeared to us to be the last stage of monastic misery, the lowest degradation of humanity. The aspiring thoughts and elegant desires, the Promethean heat, the nobler energies of the soul, the native dignity of man, all sunk, rotting, or extinguished in a hopeless dungeon of religious insanity. From such scenes the offended eye turns away with pity and disdain, and looks with impatience for a ray of relief from the light of reason and philosophy." Journal of an Embassy to China by Lord Macartney, p. 274.

we looked downwards upon the river from the probable height of one hundred feet. Upwards the view was interrupted by overhanging rocks of a stalactical appearance.

This temple, dedicated to Quong-ying, had evidently undergone much alteration since it was visited by Lord Macartney's mission. In vain did we seek for those circumstances of terror and danger so impressively pourtrayed by his Lordship. The "gigantic image with a Saracen face, grinning horribly from a double row of gilded fangs," had disappeared, and had not been succeeded by any other that struck us either with awe or wonder. We descended, indeed, with those feelings of disappointment which are the general consequence of highly raised expectation. Had we come upon this really interesting temple without warning, had we never read the pages of Lord Macartney, our astonishment and admiration might have equalled his own; but prepared for wonders, painted perhaps, rather in our imagination than in his description, we turned away dissatisfied from a gloomy cave the befitting residence of ignorance and superstition. The vacant countenances of the few monks who inhabited the rock, bespoke no sympathy or participation in the ordinary sufferings or enjoyments of human nature. Arrived at the bottom, I entered with Mr. Hayne, to the left of the temple, a small opening in the rock, apparently leading to its inmost recesses. Having obtained lights we prepared to explore them, but had not proceeded many steps, when certain odours unequivocally revealed their "hidden secrets," and warned us to retreat. A stranger in China rarely experiences a pleasing emotion without its being destroyed by some circumstance offensive to the senses.

The Quong-ying rock is composed of the grayish black transition limestone of Werner, and is remarkable in some parts for its irregugular vesicular surface. Some of the hollows were so large that they seemed to have been formed by the falling out of organic remains, but afforded no sufficient evidence of the fact. From the bonzes I procured some specimens of the overhanging rocks resembling stalactites, and found them of the same composition as the rock itself.

It might have been imagined that monks shut out from the

world would be little sensible of the value of money, and still less capable of unfair means of obtaining it. They showed themselves, however, equally prone to impose with any of their countrymen, when they found us inclined to purchase some fragments of rock which decorated a small table or altar placed beneath one of their idols. At first they freely gave us any specimen that we wished to possess, but having received a three shilling piece in return from one of the gentlemen, they no longer made gratuitous offerings, but enhanced the price to each succeeding person that visited the temple.

Having satisfied ourselves with its examination, we again continued on our route through a mountainous country, and halted the next day near a narrow pass formed by rugged rocks projecting from both banks of the river.

The hills in the neighbourhood of our anchorage were composed of grayish yellow argillaceous sandstone of a fine grain, intersected in every direction by veins of quartz. They were more productive in native plants than most that I had before visited, but were entirely uncultivated. The *Myrtus tomentosus* grew to a greater size and in higher beauty than I had elsewhere seen it, and was in great abundance. In scarcely less quantity was the *Smilax China*, famed for its sudorific properties, and a species which I could not distinguish from *Smilax lanceolata*. The gardener brought me a specimen of a *Begonia* resembling *Begonia grandis*, which he had found growing against the exposed surface of a rock to the height of twenty feet. Here also we collected specimens of a *Camellia* growing wild that we had not before met with, but which was probably a variety of the *Camellia oleifera*, yet differed from it in the narrowness of its leaves and smallness of its blossoms. The rocky banks of some small streams were covered with a species of *Marchantia* in full fruit, and one or two species of *Jungermania*. Two *Rhexias* of doubtful species grew in the rocks, and several plants of questionable genera.

Plantations of sugar-cane had been frequent in this part of our route as well as in the southern part of the province of Kiang-si.

The plants were growing to the height of seven or eight feet, and three or four inches in diameter. The mills in which the sugar was expressed appeared to be of a similar construction to one figured by Dr. Buchanan in his work on India.* It consisted of two upright cylinders of wood or stone, worked by buffaloes yoked to a long beam passing from the top of one of the cylinders. It was fed by introducing the cane between the cylinders whilst in action. The juice thus expressed was conducted by a channel into a large reservoir, and was thence transferred into boilers, whence having been sufficiently inspissated, it was conveyed into pail-shaped vessels about three feet deep and two wide, for the purpose of being transported to the refiners or to the market. The sugar thus obtained is very coarse, but undergoes some subsequent process of refinement that we had no opportunity of witnessing. It was sent to our boats of various degrees of purity and colour, but seldom of a very fine quality. A very white powder sugar, much used by Europeans at Canton, is pulverised sugar candy. The manufacture of the last article is said by De Guignes † to be confined in a good measure to Chin-tcheou, the capital of Fokien. A better kind than any made in the country is imported from Cochin-china.

The buffaloes that work the mills live upon the refuse of the sugar cane, and thrive upon it in the same manner as our English dray-horses fatten on the grains of the brewhouse. These animals, like those of Java, betrayed the greatest alarm at our approach.

The sugar cane plantations are irrigated by the mills so well described and accurately figured by the late Sir George Staunton; and are equally remarkable for simplicity, ingenuity, and efficiency. It is impossible to view these machines without giving the Chinese credit for not only using great skill, but much mathematical precision in their

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* Journey from Madras through Mysore, Canara, and Malabar, by Dr. Buchanan.

† De Guignes, tome iii. p. 261. According to the same author, a picul of common sugar sells for from four to six taels; of China sugar candy, from seven to fifteen taels; and Cochin-china, from eight to fifteen.

construction. They are made entirely of bamboo without any metallic fastenings, and are therefore so light as to turn with the slightest impulse from the stream. When in a state of perfect repair, for the greater number of those which we saw were far otherwise, the hollow bamboos fixed to their circumference and acting as buckets, are set on at so nice an angle, that they deliver the water into the trough with scarcely any loss. The height of these wheels vary with that of the bank over which they raise the water.

The Embassy having been for many weeks passing through a very mountainous country, I had looked with some anxiety for examples of that system of terrace cultivation, for which China has been famed by all its early describers; but saw none that satisfied the expectation which had been raised by the glowing descriptions of various authors. Like one of the missionaries*, I had imagined China to be an immense garden, cultivated with infinite care, and receiving its chief embellishment from mountains cut into terraces productive in all kinds of vegetable food; and, like him, I was disappointed in finding them very frequently barren of the means of subsistence, from the base to the summit. Indeed, I apprehend that no belief can be less founded on fact, than that the Chinese are in the common practice of rendering the surface of mountains naturally sterile, productive by any mode of cultivation. The instances of the terracing of hills which I had an opportunity of observing, lead me to believe that it is in a very great measure confined to their ravines, to their undulations, and to their gentlest declivities; in other words, to those situations where an accumulation of their degraded surface, affords a soil naturally fertile.

That hills formed of alluvial deposit, and having a soil more than a hundred feet in depth, are covered through the medium of terrace

* "En entrant dans le Kian-si j'apperçus à parti de moi, des montagnes arides, et au bas, point ou presque point de terrein à cultiver. Je m'étais figuré qu'elle resemblait à un vaste jardin cultivé avec beaucoup d'art et de soin." The same author elsewhere states, that in travelling over a portion of China almost equal to France, he saw, "ni bois, ni fontaines, ni jardins, ni arbris fruitiers, ni vignes." Père Burgeois, Mémoires concernant les Chinois, vol. viii. p. 293, &c.

cultivation with a succession of gardens, in some parts of China, as stated by Du Halde, I can believe, because I have found that author generally accurate in his statements of matters of fact; but I equally believe that under the most favourable circumstances, terrace cultivation is not a favourite process with the Chinese, but is only resorted to by them when they cannot obtain the full means of subsistence from the plains. On this subject my experience agrees with that of Mr. Barrow, and with a still later author, M. De Guignes, who accompanied the Dutch embassy. The former has had occasion to observe, that in his whole route, terrace cultivation "occurred on so small a scale as hardly to deserve notice;" and the latter has remarked that, although he certainly saw small fields cultivated on the very tops of some mountains in a certain canton of Kiang-nan, where the mountainous and contracted nature of the country had obliged the inhabitants to do so; yet he had traversed districts filled with mountains, of which no portion was thrown into cultivation. The same author states, that whenever the flat country is sufficient for the nourishment of the inhabitants, the slightest elevations are suffered to remain untilled. I may add on this subject, that we often passed mountains equally capable of cultivation with others that were terraced, but on which we could distinguish no trace of tillage.

Du Halde has given a chapter on the abundance which prevails in China, in which he has assembled in a few pages descriptions of all the various trees and vegetables which supply the wants of its inhabitants, and are scattered through an empire embracing in its range of latitude a temperate and tropical climate. These, displayed in so compressed a view and as illustrative of the general fertility of the empire, have led, I conceive, to very mistaken conclusions respecting the general productiveness of the soil. In some districts, perhaps, in which peculiar causes have operated, as in the neighbourhood of tea countries, for instance, "the whole surface is, with trifling exceptions, dedicated to the production of food for man alone;" but this proposition does not certainly apply to the whole empire.*

* See Malthus on Population.

Of that part of China passed through by the Embassy, I may venture to say that the quantity of land very feebly productive in food for man fully equalled that which afforded it in abundant quantity. In the province of Pe-tchee-lee the banks of the river were often alone cultivated, and even these, when of a sandy nature, were left untilled. In the province of Shan-tung, great part of the land on both sides the canal, especially in its northern part, had "suffered so severely from inundation," that it was impossible "to form a correct opinion of its general appearance."* The quantity of the *Nelumbium* and *Trapa*, however, which continually appeared, renders it highly probable that it is at all times very swampy. The province of Kiang-nan, especially in its northern part, was highly fertile; but towards its southern boundary it became hilly, and more productive in timber than in corn. The province of Kiang-si was mountainous, and although generally affording the oil, tallow, varnish, fir and camphor trees, frequently offered to our view, for several miles, no appearance of vegetable cultivation except in the hollows of the hills, or in the occasional fall of the land towards the river. In the province of Quang-tong, from the time of crossing the Mei-ling mountain till within two days sail of Canton, we met with little else than a succession of sterile mountains, which so much astonished the Père Bourgeois on his first entrance into China.

I have already stated that hills capable of terrace cultivation are often entirely untilled, and I may now make a similar observation, but with greater limitation, respecting the plains. I might here quote the declarations of those authors who assert that whole districts in China are uncultivated and uninhabited, or of those who have with justice pointed out the quantity of land occupied by the burying places of the Chinese; but I shall content myself with observing, that "much land capable of tillage"† is "left neglected," and I mean land capable of that kind of tillage which is understood by the inhabitants.

* Ellis's Embassy, p. 264. † Ibid.

I often noticed portions of land even in the vicinity of cottages and villages, remaining waste for no other conceivable reason than because its culture was unnecessary to the support of the neighbouring inhabitants. These facts, which might be deemed of too little importance for insertion in an account of any other country, are of consequence as they regard China, a country of which it has been asserted that "not an inch of ground is left uncultivated."

With respect to the numerical amount of the population of China, we obtained no new data by which to judge of the relative degrees of probability due to the discordant and irreconcileable accounts of different writers.* The apparent population, however, was not such as those statements had led me to expect. The cities, indeed, were well peopled, and under the circumstances in which we saw them, sometimes over-peopled, but the intermediate land seldom appeared fully stocked with inhabitants. But the multitudes who crowded around us in some of the larger towns and cities were so undoubtedly swelled from sources not contained within themselves, that any calculation which might have been attempted respecting them would have been liable to egregious error. De Guignes asserts that many of the cities which poured forth such astonishing multitudes when visited by Lord Macartney's Embassy, exhibited to the Dutch Mission, in the following year, no evidences of excessive population. The different circumstances attending the two embassies were the probable causes of this contrariety of experience. Lord Macartney's Embassy was, perhaps, the most splendid that had ever appeared in China from a European state: it was from a nation whom the Chinese government especially wished to impress with an exalted notion of

* In the year 1743 the population of China, according to the Missionaries, amounted to 150,265,475; in 1761, according to Father Allerstan, to 198,214,552; in 1794, according to the statement given to Lord Macartney, to 330,000,000; in 1817, when Lord Amherst's Embassy was at Canton, the most generally received calculation as applicable to the present state of China, was that of Father Amiot, taken in 1777, which gave the population at 197,000,000. A gentleman highly competent to form an opinion on this subject estimated it much lower.

its resources; and it contained the only foreigners that had ever been seen in many of the provinces which it traversed. The influence of the government, therefore, no less than the curiosity of the people, contributed to depopulate the country in the vicinity of its route, and to concentrate the inhabitants in the cities by which it might pass: Lord Amherst's Embassy was in nearly the same circumstances. The Dutch Embassy, on the contrary, little respected by the government, and following immediately after Lord Macartney's imposing mission, would modify in a much less degree the ordinary appearance of population, and consequently be in circumstances more favourable to a correct estimate of its amount.

I apprehend, however, that any person travelling through a country in a hurried journey, under a suspicious surveillance, must always be unqualified to pronounce on a question that respects a whole nation; and I shall, therefore, make no further remark on this subject, than that the visible population of China did not appear "more than commensurate with the quality of land under actual cultivation."*

In proportion as we approached Canton, the river widened and deepened, and the country opened and became more flat on both sides. Groves of orange trees, of bananas, and of the rose apple, frequently relieved extensive rice fields. The scene had, however, a dreary sameness, which would have been a little irksome to our feelings, had we been further from the termination of our journey; but our near approach to the society of our countrymen, to a re-union with our shipmates, and, above all, to intelligence of our friends in England, gave us prospects too interesting to be relinquished for the soberness of reality.

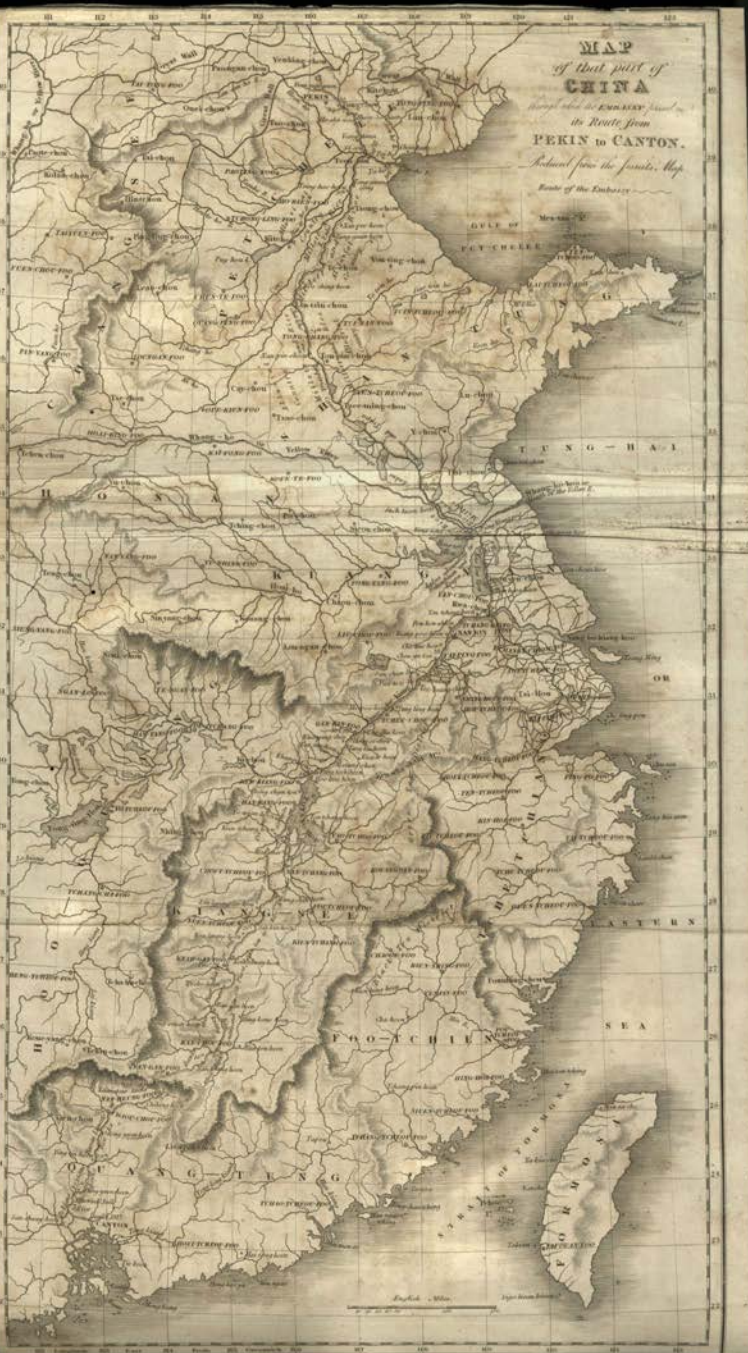
On the morning of the 1st of January, the trampling and yells of our boatmen getting under weigh at an early hour, which had so often disturbed our rest, and driven us from our beds execrating every thing Chinese, now sounded to us like grateful music, and seemed in unison with the throbbings of elated hope. We arose, and gliding

* Ellis's Embassy, vol. ii. p. 207.

swiftly down a broad and rapid stream, descried about noon, the British flag flying at some distance, and soon after, a British boat in advance of several others. "Captain Maxwell and the Alceste's boats!" was the joyful exclamation through our fleet. Our anticipations were soon verified. Captain Maxwell, accompanied by Sir Theophilus Metcalfe in the Ambassador's barge, preceded the other boats of the Alceste, and of all the British ships at that time in the Canton river, containing Captain Hall of the Lyra, and their other respective officers, and many gentlemen of the Canton factory. On this occasion Mr. Wilcocks the American consul, with his usual liberality of character, joined the procession in his own barge, to congratulate His Excellency on his safe arrival at Canton.

The boats having rowed round the different yachts and received His Excellency and the gentlemen of his suite, advanced in two lines till within half a mile of the city of Canton. His Lordship's barge then halted, whilst the other boats went a-head and landed the gentlemen of the factory and of his suite at the entrance to the quarters prepared for the Embassy, at a temple in the village of Honan, on the opposite side of the river to the British factory. They were here joined by the gentlemen of the factory, who had been unable to form part of the procession, and received the Ambassador and the Commissioners on landing.

His Excellency was immediately conducted to a spacious, and, what had been rendered by the exertions of our Canton friends, a splendid and comfortable establishment for the whole Embassy. A temple had been given up for the purpose; and the paraphernalia of idol worship had given place to the commodious furniture of an English house. Leaving what, in our sudden transition from confined boats, seemed little short of a paradise, we passed over the water to partake of a sumptuous entertainment at the British factory; and soon forgot, amidst the hospitality of our countrymen, the inconveniences of our vexatious journey.


MAP
of that part of
CHINA
through which the EMBASSY passed on
its Route from
PEKIN to CANTON.
Reduced from the Jesuits Map
Route of the Embassy
Great Wall
PEKIN
GULF OF PETCHELEE
TUNG-HAI
HONAN
KIANG-NAN
KIANG-SEE
FOO-TCHIEN
QUANG-TUNG
CANTON
EASTERN SEA
STRAIT OF FORMOSA
FORMOSA
English Miles

CHAPTER VIII.

VARIOUS and deeply interesting were the events which had been experienced by the Alceste and Lyra during our absence. We had to hear a tale of discoveries accomplished in unknown seas amidst often recurring, and as often conquered difficulties. Much had been expected from the characters of the commanders, but more had been accomplished than either time or opportunity had seemed likely to offer. The gulfs of Pe-tche-lee and Leatong had been surveyed, and communications held with the inhabitants of their shores; part of the south-west coast of Corea had been examined, an enormous geographical error respecting its position rectified, and its archipelago discovered; the Lew-chewan islands had been visited, and their humane and intelligent inhabitants impressed, through the wise conduct of Captain Maxwell, with the highest regard for the English character.

Leaving Lew-chew, the ships made for the coast of China, and arrived off it on the 2d of November, when the Lyra was dispatched to Macao and the Alceste anchored off the island of Lin-tin. As soon as Captain Maxwell could communicate with any Chinese authorities, he applied to the viceroy for a pass to carry his ship up the Canton river to a secure anchorage, and to a situation where she could undergo some necessary repairs. Evasion after evasion, accompanied by insulting messages, were the only proofs that he obtained of his application having been received. After waiting quietly for some days, he determined, under the pilotage of Mr. Mayne the master of the Alceste, to carry his ship to a safe birth up the river; but had scarcely approached the Bocca Tigris, when he received a

peremptory order to drop his anchor, or to proceed on his course at the hazard of being sunk under the batteries at the entrance of the river. He chose the latter alternative, and steered his ship close under the principal fort, followed by a fleet of war junks. Both junks and batteries immediately endeavoured to make good the threat by opening a heavy fire. The return of a single shot silenced the fleet, and when the guns could be brought to bear, one broadside was sufficient for the batteries. After this affair the ship proceeded quietly to her anchorage.

The effect of this decisive conduct was evinced the next day, by the arrival of all kinds of supplies to the Alceste, and of a cargo to the General Hewitt Indiaman, before withheld on the plea of her being a tribute ship; and by the publication of an edict, endeavouring to make the action appear to the Chinese as a mere salute. Such is a rapid outline of occurrences which the interesting narratives of Captain Hall and Mr. M'Leod have rendered a more detailed account of unnecessary in this place.

The viceroy having been defeated in his attempts to intimidate or cajole Captain Maxwell, hoped to recover his consequence in the eyes of his countrymen by his treatment of the Ambassador. It was known soon after our arrival at Canton that an imperial edict had been received by the viceroy, giving a fallacious account of the transactions of the Embassy, and directing him to invite the Ambassador to a feast and to point out to him all the advantages that he had lost by refusing to perform the ceremony of the Ko-tow. The words of the edict will best explain their own purport. "When the Ambassadors arrive at Canton, you will invite them to dinner in compliance with good manners, and will make the following speech to them: "Your good fortune has been small; you arrived at the gates of the imperial house, and were unable to lift your eyes to the face of heaven (the emperor.) The great emperor reflected that your king sighed after happiness (China), and with sincerity. We therefore accepted some presents, and gifted your king with various precious articles. You must return thanks to the emperor for his benefits, and return with speed to

your kingdom, that your king may feel a respectful gratitude for these acts of kindness. Take care to embark the rest of the presents with safety, that they may not be lost or destroyed."

"After this lecture should the Ambassador supplicate you to receive the remainder of the presents, answer in one word, a decree has passed, we therefore dare not present troublesome petitions, and with decision you will rid yourself of them."

It was also ascertained that the viceroy had in charge a letter from the Emperor to the Prince Regent, in delivering which to the Ambassador, he was expected to follow the instructions of the edict. The letter was delivered to His Excellency on the 7th of January, with much form by the viceroy, but with only a feeble attempt to effect his intention. The ceremony on this occasion was more imposing on the part of the English than of the Chinese, and was chiefly interesting to us, as affording the spectacle of a petty tyrant shrinking under the calm dignity of an English nobleman. It commenced in a small open building that might be called a temple, containing an altar decorated with yellow silk, vessels of incense, and a variety of unintelligible ornaments. Here the Viceroy, Foo-yuen and Hoppoo, received the Emperor's letter, enclosed in a case of bamboo covered with yellow silk, and brought in a sedan carried by thirty-six bearers; and having performed the ceremony of prostration in private, awaited the arrival of the Ambassador. His Excellency in his robes, accompanied by Sir George Staunton and Mr. Ellis, attended by the gentlemen of his suite and of the Factory, by Captain Hall, and several other naval officers, and preceded by the guard and band, left his house about noon for the conference. The guard and band having formed into two lines within a few yards of the temple, the Ambassador advanced between them, somewhat in front of his train, to the steps of the building, and on ascending them was met by the viceroy. A slight salutation having passed, the viceroy took the letter off the altar, and holding it in both hands above his head, gave it to the Ambassador, who received it in the same manner; and with like form transferred it to his private secretary, raised his hat and bowed.

The whole party then adjourned to another decorated building, to continue the conference. Three persons on each side were alone allowed to sit. The Ambassador, Sir George Staunton, and Mr. Ellis, sat opposite to the Viceroy, Foo-yuen, and Hop-poo respectively. The viceroy, by a previous arrangement, had voluntarily ceded the place of honour to the Ambassador, on the left hand side of the apartment.

The Viceroy, whose lowering brow and gloomy visage strongly expressed his character of cunning and his feeling of mortified pride, had endeavoured on first meeting His Excellency, to assume an overbearing port, but he grew pale, and his eye sunk under the stern and steady gaze of the English Ambassador. He in vain endeavourd to regain his self-possession on his way from the temple, by outwalking His Excellency, and thus obtaining the appearance of superior rank in the eyes of the Chinese; and was again disappointed. During the conference he once more attempted to make good his pretensions, by assuming an arrogant tone and insinuating an offensive remark respecting the high privileges enjoyed by the English in China, and their sole dependence on commerce; but this was the expiring struggle of self-importance. The Ambassador having in a decided manner replied that the intercourse between the two countries was equally advantageous to both, he altered his tone, and confined himself to unobjectionable subjects: that he might not recur to others, the Ambassador speedily broke up the conference. On leaving the building in which it had been held, the Viceroy pointed to a large collection of fruit and sweetmeats spread in an opposite tent, as an imperial present to the commissioners. His Excellency requested that the Emperor might be thanked, and returned to his residence.

The contents of the Emperor's letter to the Prince Regent formed a subject of much speculation with the Embassy. There was every reason to expect, judging from the imperial edicts which we had seen in different parts of our route, and since our arrival at Canton, that it would give a very false and distorted account of all the transactions of the Embassy. It contained in fact, several unblushing

falsehoods; amongst others, the assertions that Lord Macartney had performed the ceremony of prostration, and that Lord Amherst had promised to do so, but afterwards refused. We felt no regret in learning that with a government so faithless, the delivery of the letter had terminated the Ambassador's official intercourse.

The Embassy employed themselves during the short time they remained at Canton, in visiting its numerous streets and examining the various specimens of ingenuity there displayed in a profusion and excellence no where else to be found in China. A stranger having no other intercourse with the country than through the medium of Canton, would be led to form an inaccurate judgment both of the general ingenuity and luxury of its inhabitants. In looking at the different works in ivory, tortoise-shell, and lacquer, so minutely wrought that great time must have been expended in working them; and seeing them of forms not less calculated for utility than decoration, he might suppose that the interior of Chinese houses would realise the visionary tales of eastern authors. But if he had passed through a considerable portion of the empire, he would conclude, that the accumulation of the beautiful objects that adorn the shops of Canton, must depend upon some cause quite unconnected with the common habits of the people: he would in fact find, on a close inspection, that they are in a large proportion formed on European models. Except in the houses of the Hong merchants, and these formed no wide exception to the rule, we always found Chinese dwellings more remarkable for the simplicity of their interior decoration than any other character.

I have before had occasion to mention that the fans in use amongst the Chinese within our observation, were made of the rudest materials, and I might make the same remark respecting most other articles of Chinese manufacture so much admired in this country. At Kang-cho-foo, a city famed for its lacquered ware, we had hastened into its streets in the hope of purchasing some specimens of its manufacture, but although we found them in considerable abundance, could no where discover any that were worth our notice. The manu-

facture indeed seemed to be confined to utensils of wood, not better varnished than the common tea chests sent to this country.

I have already had occasion to mention the skill of the Chinese in cutting the hardest stones, in describing a vase of exquisite workmanship which I found in a shop at Tien-sing. At Canton I had an opportunity of ascertaining their capability of hollowing them, in a manner quite enigmatical to European workmen. Of these the snuff bottles of rock crystal and of agate were amongst the most puzzling. I have one of each of these now before me, which, through openings in their neck not the fourth of an inch in diameter, have been worked into the perfect hollows of glass smelling bottles.

The Chinese possess a peculiar facility for cutting stone, in the large quantities of adamantine spar or corundum which are found in their shops, and which came, they said, from the neighbourhood of Canton. That they have it near at hand and of easy access, is probable from its profusion, and the low price at which they sell it. For a Spanish dollar I obtained as much as I chose to accept. The only opportunity that I obtained of seeing it used was in the manufacture of lenses made for spectacles, and which are formed from rock crystal, with the assistance of powdered corundum, and a bow with a steel thread. The workman fixes a mass of the crystal, which he has previously worked into a cylindrical form, over a small trough of water firmly before him; and having besmeared the surface of it with the powdered corundum made into a paste with water, cuts it into laminæ by the continued action of the bow, which he assists by adding fresh portions of the corundum paste, and moistening the crystal with water from the trough. The rough segments thus obtained are afterwards ground into lenses of different degrees of convexity, but according to no certain rule.

In the shops of porcelain at Canton, in all respects inferior to those we had seen at Nan-chang-foo, I in vain endeavoured to obtain the materials used in its composition. I had no reason however to suppose that the corundum, as has been suspected, is one of them. Of the other ingredients, the kaolin is well known to be the porcelain

earth of other countries, but the petuntse has not been so well ascertained. The late Sir George Staunton described it as a species of granite, in which quartz seemed to bear the largest proportion. I am rather inclined to think, that pure quartz alone is the petuntse of the Chinese, from having, when off Hong-kong, seen boats laden with quartz evidently taken from veins which abounded in the neighbouring granité rocks.

Although more fortunate in obtaining the minerals said to be employed in colouring the porcelain, I have no other observation to make respecting them, than that their names did not accord with their colours, proving that they undergo some modification before they are applied to the porcelain, or whilst they are exposed to the heat of the furnace. It was not without repeated assurances that I had no intention of establishing a porcelain manufactory in my own country, that I was enabled to procure them from their vender at a considerable price.

Glass shops abound in the streets of Canton, but are chiefly filled with European goods, excepting only those of the mirror makers. All the looking-glasses that we saw in China were remarkable for the extreme thinness of the plate, which was scarcely thicker than common writing paper, but was coated with an amalgam in the manner of our own. According to the Missionaries, the Chinese have for ages possessed the art of glass making; but if this be the fact, it is singular that they should derive no advantage from it; and whilst they set a very high price on all glass articles, make none but from the glass which they obtain from Europeans and re-melt. Till we arrived in the province of Canton, excepting small mirrors and a few baubles, we had met with no glass throughout the empire.

The drug shops in Canton were as numerous as in other cities of China, but did not enable me to obtain much information respecting the pharmacy of the country: they contained an innumerable list of simples, a few gums, and some minerals. Many of the first are sold in small packets; each packet containing a dose or certain

number of doses, enveloped in a wrapper describing the qualities of the medicine and the mode of administering it. Of the gums I could only make out the camphor. This substance, as exposed for sale at Canton, was in very small fragments about the size of a pea, and seemed to have been picked out from the interior of the plant, and no doubt came from Borneo or Sumatra.* It is not † procured from the same plant as the Chinese camphor, and, there is some reason to believe, is of a more volatile nature, and possesses more powerful properties. The Chinese physicians are so persuaded of this, that although the most ordinary kind costs them four hundred taels, or upwards of one hundred and thirty pounds the piccul, they prescribe it in preference to their own, the best of which is exported for twenty-eight taels, or less than ten pounds the piccul.

The Chinese employ camphor largely in a great number of diseases, and to free themselves from vermin, to which I but too well know, from my own experience, that the Chinese are remarkably subject. A very common amusement amongst our boatmen was in searching for them in their clothes, and cracking them between their teeth.

No opium is exposed for sale in the shops, probably because it is a contraband article, but it is used with tobacco in all parts of the empire. The Chinese indeed consider the smoking of opium as one

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* The plant whence the Borneo or Sumatra camphor is procured has been described and figured in the twelfth volume of the Asiatic Transactions, by Mr. H. T. Colebroke, under the name of *Dryabalanops Camphora.*

† The mode of procuring the Borneo camphor is thus related by Mr. Marsden. "The tree, when cut down, is divided transversely into several blocks, and these again are split with wedges into small pieces, from the interstices of which the camphor, if any there be, is extracted. That which comes away readily in large flakes, almost transparent, is esteemed the prime sort or head; the smaller clean pieces are considered as belly; and the minute particles, chiefly scraped from the wood and often mixed with it, are called foot, according to the customary terms adopted in the assortment of drugs. The mode of separating it from these and other impurities, is by steeping and washing it in water, and sometimes with the aid of soap." History of Sumatra, p. 150.

of the greatest luxuries; and if they are temperate in drinking, they are often excessive in the use of this drug. They have more than one method of smoking it: sometimes they envelope a piece of the solid gum in tobacco, and smoke it from a pipe with a very small bowl; and sometimes they steep fine tobacco in a strong solution of it, and use it in the same way. The smokers of opium have a very peculiar, sottish, and sleepy physiognomy, in consequence of the whole visage being turgid with blood. They may acquire this from their mode of inhaling its smoke, of which they seldom take more than three or four whiffs. Having lighted their pipes, they draw into their lungs as large a volume of smoke as possible, and having held their breath for a few seconds, throw it gradually forth through their nose, mouth, and ears, so as strongly to impress these organs of sense. They then fall into a sort of torpor and continue in it for several minutes, and much longer when they can command time for its indulgence.

Tobacco is every where sold, and is considered by the Chinese, next to tea, as the best preservative of health, and is therefore universally used by all ranks: I never saw a Chinese without his pipe. It is used in very different states in different provinces, and has very different degrees of strength, depending in some measure perhaps on the difference of soil and climate where it is cultivated. In the province of Pe-tchee-lee, and probably in all the northern provinces, it is very mild, but in the south it has much more powerful qualities. These different properties may also depend on the various modes of preparing it. In the province of Pe-tchee-lee it is of a pale colour, and undergoes no other preparation than that of drying, and is sold in the whole leaf to the purchaser, who reduces it to a coarse powder, by rubbing it between the hands before using it. After entering the province of Kiang-nan it was always found of a red colour, and cut into exceedingly fine shreds; but was said to owe its colour to steeping in a solution of opium. We saw the mode of cutting this variety of tobacco in several places. Considerable quantities of its leaves having been acted upon by a powerful

press, and thus formed into a compact mass, are cut by a plane into small shreds.

From the mineral kingdom the Chinese appear to draw some remedies, and especially mercury, which they employ in several forms, and in the diseases for which its specific powers are used in other countries. They employ some of its oxides and its muriate externally in cutaneous diseases; and a very beautiful preparation, consisting of fine flakes, of a pearly white colour, internally in chronic disorders; but fumigate with the sulphuret of mercury when they wish to produce its most powerful effects. To Mr. Pearson's Paper, in the ninth volume of the Annals of Philosophy, I may refer my readers for further information on this subject. It is especially curious, as affording illustrations of the complicated and blundering methods by which the Chinese, in their chemical operations, arrive at vague results unaided by the slightest glimmering of science.* Although the Chinese understand the use of mercury they seldom intentionally exhibit it to the extent of producing salivation, and consequently often fail in curing complaints for which they prescribe it. The Hong merchants are so sensible that European practitioners know its qualities much better than their countrymen, that they always place themselves under their care in all cases requiring its use.

The practice of medicine of the Chinese is entirely empirical. Through the kindness of Mr. Manning, who acted as my interpreter, I had an opportunity of conversing with one of the most respectable native practitioners of Canton, and found him entirely destitute of anatomical knowledge. He was aware of the existence of such

* The following is a preparation of mercury peculiar to the Chinese: "On choisit des poulets de six mois, bien forts et bien portans; après les avoir enfermés dans un endroit où ils ne puissent manger que ce qu'on leur donne, on les engraisse pendant un mois, en les nourrissant de bon grain et de sénevé; puis après les avoir fait jeûner un ou deux jours pour les ouider, on les nourrit avec de la pâte où l'on a broyé du mercure bien purifié, puis on recueille avec soin leurs excrémens, qu'on fait sécher, et qu'on donne ensuite d'une manière appropriée à la maladie. Le vif argent ainsi préparé, est admirable pour les maladies de langueur. Du reste, il faut changer les poulets après trois jours." Mémoires concernant les Chinois, tom. ii. p. 314.

viscera as the heart, lungs, liver, spleen, and kidneys, but had no notion of their real situation, and through some strange perversity placed them all on the wrong side of the body. This man was not, however, ignorant through choice, for he viewed with much eagerness and with an evident anxiety for information, some of the anatomical plates of the Encyclopædia Britannica, which I procured from the library of the Factory; and he with much apparent sincerity told Mr. Manning, that good anatomical plates on a large scale would be the most valuable present that could be conferred on his country. Although ignorant of all rational principles of practice, he had arrived through his own experience, or that of others, at some rules of high utility; making a very clear distinction between those local diseases which can be cured by mere topical applications, and those which can only be acted upon through the medium of the constitution. He had some vague notions of a humoral pathology, which he seemed to have perpetually in his mind whilst answering my different questions; talked of ulcers being outlets to noxious matter; and divided both his diseases and remedies into two classes, the hot and cold. The difficulty of our intercourse, arising from the impossibility of finding adequate terms in the Chinese language for medical phrases, prevented my obtaining much accurate information respecting the details of his practice. The only general fact at which I could arrive respecting it, was, that he depended greatly on purgatives for driving out the "heat of the body," and for producing a favourable change on local disorders.

I endeavoured to obtain some facts from my informer respecting the use of the moxa or actual cautery amongst the Chinese; and found that he considered its application as one of the most effectual remedies for local pain. The moxa is prepared by bruising the stems of a species of *Artemesia* in a mortar, and selecting the finest and most downy fibres. In this state it is applied in small conical masses upon the part affected; the number being proportioned to the extent or severity of the disease. These being set on fire, instantly consume, without, as the physician assured me, producing any severe

pain. From his ignorance of anatomy I could not learn whether the moxa be used amongst the Chinese in any cases of enlarged viscus; but I have no doubt, from his unqualified statement, "that it is applied in all cases of local pain," that it is resorted to in liver or any other internal diseases, when expressed by external uneasiness. That it is applied in affections of the head I had sufficient evidence, in the number of Chinese whom I saw in different parts of the country, having on their foreheads small round escars, bearing every appearance of having been produced by the action of fire. My informer took great pains to persuade me of the general success of the remedy. To act upon the imagination as well as the body, it is asserted that the part to which the moxa is to be applied is often first pricked with gold pins, and that itinerant practitioners in the north of China, fire it with much ceremony by the assistance of a convex mirror of ice.*

The fibre of the artemesia is also used by the Chinese as tinder, after previously steeping it in a solution of nitre; and is carried by them in small pouches suspended from their girdles, by the side of their pipes.

The small pox, which for centuries has at different periods made dreadful havock all over the empire, is likely soon to be extirpated by the benign influence of vaccination establishing under the auspices of Mr. Pierson, the principal surgeon of the British factory. The first attempts of that gentleman to introduce it were pertinaciously opposed; but through his active and persevering humanity, aided by a small publication in the Chinese language by Sir George Staunton and himself, pointing out its peculiar safety, and the security which it gives against the small pox, it has obtained the sanction of the local government of Canton, and the strenuous support of the Hong merchants. Native vaccinators have been appointed and educated under the eye of Mr. Pierson, and are taking from him the labour

* On fait geler de l'eau dans un vase rond et convexe; la glace présentée au soleil en réunit les rayons et allume l'armoise." Mémoires concernant les Chinois, tom v. p. 517.

of inoculating the lowest class of Chinese. I witnessed their operations, in a temple near the British factory, on some of the children of the hundreds of anxious parents who flocked to procure the preservation of their offspring from the small pox, at that time prevalent at Canton. If the paternal government of China can free itself from national prejudices, it will erect a monument of gratitude to the discovery of Jenner, and the services of Pierson.

In the shops of Canton, and of many cities of China, we saw such large quantities of striated gypsum, as proved its very extensive use. I was neither fortunate enough to obtain any information respecting the places whence it is procured, or the purposes to which it is applied. I am disposed to believe, that after having been deprived of its water of crystallization by heat, and thus reduced to mere plaster of Paris, it is used in the composition of a cement for stopping the leaks of boats. A cement, of a white colour, was exposed for sale in shops, and applied to the leaks of our own boats; and as it was used under circumstances in which it was necessary at once to keep out the water, it was probably a substance that very speedily hardened.

The gypsum has been supposed to be used as an antidote to the effects of mercury, but as this remedy is very rarely given to the extent of producing salivation, it is not perhaps very likely to be administered with this view.

Our rambles in the streets of Canton were entirely confined to the suburbs; the city itself being as inaccessible to the curiosity of the Embassy as it is at all times to the members of the British factory. One of the gentlemen not being quite satisfied that it was impossible to enter it, and finding himself one day unexpectedly before its gates, ventured to pass them; but had not advanced far when he was followed by a Chinese, who ran after him, holding in his hand an areca nut, and urging him to return to his stall to make some purchase; taking him at the same time so forcibly by the arm, that his obeying him was scarcely voluntary. Having reached the stall, he endeavoured to satisfy the man that he had

no wish to buy any thing, and again left him in the hopes of penetrating into the city. But the Chinese followed him a second time, and seizing his arm still more roughly, led him in a very determined manner, but with an air of mock politeness, to the outside of the gate. It afterwards appeared, that a police officer, in the character of a salesman, had been posted at the gate for the purpose of intercepting any strangers who might attempt to enter the city.

Satisfied with exploring the suburbs of Canton, the Embassy were desirous of turning their steps to the surrounding country; but this was also prohibited ground, excepting the nursery gardens at Fa-tee, situated on the southern bank of the river about three miles from Canton. The reputed richness of these gardens in rare and beautiful plants raised our expectations, and did not lead entirely to their disappointment. Plants remarkable for their dazzling colours and singular forms were, however, more cultivated than those of great rarity. The *Mou-tan* or peony tree, *Azalias*, *Camellias*, the *Vaccinium formosa*, roses, and a great variety of orange plants in full fruit, were the most general. The mou-tan, also called fa-wang or king of flowers, on account of its beauty, and pe-leang-king or hundred ounces of gold, on account of the enormous price given for it by the curious, was not in flower when I saw it. I could not therefore judge, from my own observation, of the fidelity of those Chinese drawings which represent this plant with yellow flowers, and was unable to meet with any person at Canton who had either seen or believed it to exist. The mou-tan is said never to survive more than three years at Canton or Macao: all the plants of it which I saw were very young.

Of the double flowered *Camellia Japonica**, the varieties were numerous; but in no respect different to those that are seen in this

* I have no doubt that this plant is often confounded with the full flowered *Camellia oleifera*, and that the latter is often sent to this country and cultivated for the former. The *Camellia oleifera* may be distinguished from the *Camellia Japonica* by its more silky calyx, and still more decidedly by its leaves being veinless beneath.

country. They are cultivated in such profusion at Canton, that their petals are sometimes used at feasts to strew upon the table, so as perfectly to cover every part unoccupied by dishes.

The *Azalias* exhibited no striking varieties of colour, being either white or red, of different degrees of intensity; but were certainly the most beautiful plants that I met with in China. A very large specimen which I had on board the Alceste bearing blossoms of a light red, was in such profuse flower the day before the wreck, that its leaves were literally hidden.

The *Vaccinium formosa* is a sacred plant; its flowers are gathered at the commencement of the Chinese new year, and placed in all the temples as an acceptable offering to the gods.

The *Lycopodium*, which I had met with on the tops of barren hills in the province of Canton, growing to the height of four or five inches, and which might perhaps be best compared to a fir-tree in miniature, was to my surprise cultivated in pots kept in a tub filled with water; for it had always been found in very arid situations.

Almost all the dwarf plants seen in the gardens were elms, twisted into grotesque shapes. One of the principal methods of checking their growth, and giving them the appearance of age, appeared to consist, in taking up a young plant and putting it into a pot too small to allow the spreading of its roots, thereby depriving it of the means of vigorous growth; and by afterwards wounding the bark in different places, so as to cover it with scars which might seem to be the consequence of decay; and by tying the branches to each other, and giving them all kinds of curves.

Besides the plants already mentioned, I here saw the different varieties of the tea plant, of which it has often been asked me since my return, whether there be more than one species. This question I have not been able satisfactorily to answer, although I had little doubt, when examining the different plants, that there were two species; but I could not at the time define their characters, and have since lost the specimens through which I had expected to

establish them. It may, however, be remarked, that the plants which had been brought from the black and green tea districts, differed in the form, colour, and texture of their leaves; those of the green tea plant being longer, thinner, and of a lighter colour than those of the black, although growing in the same soil: this difference of character I also observed in a large tea plantation near Macao.

I could gain no information in China inducing me to believe that the process there used in manufacturing the leaf differs materially from that employed in Rio Janeiro, and which appears to be nearly the same as that of Japan, described by Kæmfer. From persons perfectly conversant with the Chinese method, I learnt that either of the two plants will afford the black or green tea of the shops; but that the broad thin-leaved plant is preferred for making the green tea. As the colour and quality of the tea does not then depend upon the difference of species, it must arise from some peculiarity in the mode of manufacturing them. Drying the leaves of the green tea in vessels of copper has been supposed, but apparently without foundation, to account for the difference in colour. Without going into the supposition that any thing extraneous or deleterious is used, both difference of colour and quality may perhaps be explained, by considering one of the known circumstances attending its preparation; namely, the due management of the heat used in drying the plant. There can be little doubt, that a leaf dried at a low heat will retain more of its original colour and more of its peculiar qualities than one that has suffered a high temperature. Supposing, therefore, the leaves of the same species or variety of the tea plant to have undergone such different degrees of heat in their preparation, their peculiar properties would be expected to occur of greatest strength in those of the greenest colour; or in those to which both Chinese and Europeans attribute the most powerful properties. I may here add, that by far the strongest tea which I tasted in China, called "Yu-tien," and used on occasions of ceremony, scarcely coloured the water. On examining

it with a view to ascertain the form of the leaves, I found it to consist of the scarcely expanded buds of the plant.

The question whether the tea plant will thrive in any other country than China, has in a great measure been settled by the success of the tea plantations at Rio under very little encouragement. It may be worth, however, considering what are the countries in which it is most likely to succeed, from their relation to its natural places of growth. The green tea district in the province of Keang-nan is embraced between the twenty-ninth and thirty-first degrees of north latitude, and is situated at the north-western base of a ridge of mountains which divides the provinces of Che-keang and Keang-nan. The black tea district, in the province of Fokien, is contained within the twenty-seventh and twenty-eighth degrees of north latitude, and is situated on the south eastern declivities of a ridge of mountains dividing the province of Fokien from that of Keang-si. Thus the whole range of the great tea districts of China, from the lowest to the highest degree of latitude, is from twenty-seven to thirty-one. But although these are the two districts from which the tea consumed in Europe is derived, the plant also flourishes in much higher latitudes. According to the Missionaries, it thrives in the more northern provinces of China; and from Kæmfer it would appear, that it is cultivated in Japan as far as forty-five north latitude. All the known habitats of this plant are consequently within the temperate zone. Looking then to the latitudes in which the tea is cultivated with success, and especially to those of the great black and green tea districts, the Cape of Good Hope would seem to be the most eligible geographical situation for its culture; and perhaps would be also found the most favourable with respect to soil.

It appears, from every account given of the tea plant, that it succeeds best on the sides of mountains, where there can be but little accumulation of vegetable mould. Our opportunities of seeing its cultivation were few, but were all in favour of this conclusion. Its plantations were always at some elevation above the plains, in a

kind of gravelly soil formed in some places by disintegrated sand-stone, and in others by the debris of primitive rocks. A large and flourishing plantation of all the varieties of the plant brought together by Mr. Ball, the principal tea inspector at Canton, is situated on an island close to Macao in a loose gravelly soil, formed by the disintegration of large-grained granite. Judging from specimens collected in our route through the province of Keang-nan, whence the green tea is procured, its rocks consist chiefly of sandstone, schistus, and granite. As to what may be the exact nature of the rocks of the black tea country in the province of Fokien, I have no precise information. But as the great ridge separating that province from Keang-si is a continuation of the one dividing the latter from Canton, it is perhaps legitimate to conclude, that their constituent rocks are the same; and that the hills and soil on the eastern are the same as we found them on the western side of the ridge, or that they are covered by a soil like that in which the *Camellia* flourishes. If this reasoning be just, the land forming the Cape being composed of the same class of rocks, namely, granite, schistus, and sand-stone, and of the same kind of soil that constitute the tea districts of China, would be scarcely less favourable with regard to structure than geographical situation for the culture of the tea plant.

But although the tea plant might for these reasons succeed better at the Cape than in many of our other dependencies, the success of the American plantations proves that it will assuredly flourish on the verge of the tropics. That it will also grow vigorously within them, is sufficiently evinced by the fine plants which thrive in Sir Hudson Lowe's garden at St. Helena. But in both these situations, it seldom experiences a very high temperature. In Rio Janeiro the botanic garden is situated near the sea-shore, and receives the full influence of the land and sea breezes which blow during the greater part of the twenty-four hours. On the hills of St. Helena, freshened by the trade winds, the thermometer ranges from sixty-four to seventy-six degrees. The principal circumstances therefore to be kept in view in cultivating the tea plant are to obtain for it a

meagre soil and a moderate temperature; and these may always be found on the mountains of tropical islands, and on the inland hills of temperate continents.

With respect to the management of the plant whilst growing, and the gathering of its leaves, there is not, I apprehend, much that is necessary to be learnt. From the general statement of authors it appears, that after the seed is once committed to a favourable soil, little subsequent attention is required. A few plantations of green tea, seen by the Embassy in Keang-nan, consisted of very low plants, perhaps kept down by pruning; as the Missionaries tell us that the plant of the green tea districts is never allowed to grow to a large size; but that in the black tea country it is suffered to attain its full height, which sometimes reaches to ten or twelve feet. In collecting the leaves the principal circumstances that seem necessary to be attended to are, to gather them at the proper seasons, to select the young leaves for the superior kind of tea, and the older leaves for that of inferior quality. The many varieties of tea seen in this country are doubtless the produce of the mixture of teas of different qualities, after their arrival in England.

But granting that the preparation of tea is more complicated than there is reason to suppose, it might doubtless be obtained from the proprietors of tea plantations who frequent Canton during the tea sales; and is perhaps even now in the possession of many Europeans. If ever it shall suit the policy of this country to derive the tea from any of our own dependencies, there can be no doubt that we shall cease to be indebted to China for an article that enters so essentially into the comforts of all classes of my countrymen. I have heard much of the difficulty of transporting plants from China, in sufficient numbers, and in such health as to give a fair chance to any experiment for their cultivation; but cannot imagine where that difficulty lies. A great number of plants which were on board the Alceste for the purpose of being left at the Cape and at St. Helena, were in the most vigorous state the day previous to the wreck, and

there can be no doubt would have arrived thus at their places of destination.

Whether the leaves of many other plants would not attain the same quality as the tea, if submitted to the same process, is at least doubtful. Du Halde has remarked, that all the plants called Cha or Tea by the Chinese, are not to be considered as the tea plant; and states, that a vegetable preparation sold in Shan-tung as very superior tea, is only a species of moss common to the mountains of that province. That the Chinese drink an infusion of ferns as tea is certain, as these plants were sold for the express purpose at Nan-chang-foo on the Po-yang lake. I cannot help suspecting that they employ the leaves of the *Camellia* in the same way. This plant bears the same name as the tea with the Chinese, and resembles it in most of its botanical characters, grows with it in the same district, and is I suspect cultivated in the same manner: the seeds of both produce oil. Kæmfer informs us, that a species of *Camellia* is used in Japan to give a high flavour to tea.

Whatever observations I have made relative to the probability of the successful cultivation of the tea plant, equally applies to the *Camellia oleifera*, or oil plant. I cannot but believe, from what I have observed of the soil and climate of St. Helena, that many of its present barren hills might be covered with this elegant and valuable shrub.

The time unoccupied by the Embassy in visiting the streets of Canton and the neighbouring gardens, was in some measure spent in exploring the intricacies of the temple in which they resided, and in witnessing the religious rites of the bonzes. It was only during our residence at Canton that we had any opportunity of seeing these on a great scale.

The large religious establishment, of which we inhabited a part, to the exclusion of numberless deities, almost equalled a town in extent. Temples with dormitories annexed and other buildings for the accommodation of bonzes, and ornamented exteriorly with all the

tawdriness that perverted taste could suggest, and containing a host of gilded idols, were distributed over an extensive piece of ground. The different apartments occupied by the Embassy, had been the temples of minor deities and the dwellings of their priests; and communicated with each other by long and narrow passages. These were intricate and mysterious, and often terminated in small enclosed yards, intended for no purpose that courted the face of day; or suddenly opened into squares decorated with a profusion of gay and fragrant flowers. The imagination suggested that fear and pleasure were equally used by the ministers of superstition to operate on the minds of its deluded votaries. On leaving this labyrinth we passed a number of edifices, some open in front, others closed, and all containing idols of various degrees of dignity and influence. To describe their different forms, or to give their several appellations, would not only exceed the limits and objects of this work, but be a waste of time and labour, of which the Missionaries seem to have been little sensible in their elaborate accounts of the minute subdivisions of the religion of Fo. I may leave my readers to imagine the endless sects that must have divided a religion, of which the founder took the following doctrine as its basis: "There is no other principle of all things but a vacuum and nothing; from nothing have all things sprung, to nothing they must again return, and there all our hopes end."*

Four hideous monsters "in form and gesture proudly eminent," occupied, two on the right hand and two on the left, the entrance to an avenue leading from the precincts of the principal temple. Colossal height and proportions, corpulency, the Chinese physiognomy caricatured, profuse gilding, green and red paint, were their leading characters. Incense was burning at all hours of the day on an altar before them. A miserable devotee, generally a female, was often seen deprecating their wrath or soliciting their favour.

* Grosier, vol. ii. p. 219.

On these occasions a taper was lighted at the foot of the idol, and a priest attended to direct the ceremony. Rice for consecration, and a painting of some image on paper as an offering, seemed to be necessary to its due performance. The bonze having received these, and placed the rice on the altar, lighted the painting by the taper, and put it in an earthen vessel standing on the ground, to consume: this vessel was the common receptacle for the ashes of all such offerings. The supplicant now received from him two pieces of wood in shape like a kidney, which she suffered to fall repeatedly from her hand, ejaculating at the same time with much fervour, and lifting up her eyes to the idol. When she had finished the bonze took some ashes from the incense vessel, and having mixed them with the rice, gave her the consecrated mass, and thus finished the ceremony.

In the principal building of the establishment, we had an opportunity of witnessing those rites which, from their general resemblance to the ceremonies of the Roman Catholic church, gave so much offence to the early missionaries. They fully justified the exclamation of Father Premare, that "in no other part of the world has the prince of darkness so well counterfeited the holy manners of the true church." The temple was large, of an oblong square in form, and contained upwards of a hundred idols reputed of various degrees and kinds of influence. In the centre of its area were a group of superior deities exalted on a platform some feet from the ground, leaving on all sides a wide aisle between it and the walls of the building. Along these were arranged the minor deities, or more properly speaking deified men. Vessels of incense stood on altars before all the principal idols. In their vicinity were gongs, drums, a hollow instrument of wood, in from resembling a human skull, and many other musical instruments. Mats were strewn around for the convenience of the worshippers.

Summoned at different hours of the day and night by the tolling of a bell, the bonzes repaired to this temple to perform their devotions. One of the chief ceremonies commenced about four o'clock in the

afternoon. At this hour bare-headed bonzes, clothed in long cloaks descending to their ancles, some of a yellow, and others of a dark brown colour, were seen issuing from all the surrounding buildings. Over these they wore a kind of scarf that crossed their left shoulders, and was fastened by an ivory ring under the right arm; and some of them had on their left breasts pieces of white copper which might have been taken for orders of knighthood. Having entered the temple, they all, excepting one of the principal priests, knelt around the idols. He began the ceremony by lighting a sandal-wood match at a taper that was burning on the altar; and having prayed with it in his hand for a few seconds, carried it to the door of the temple, and fixed it in a small post that stood without. Returning to the altar, he took up a small vessel containing rice, and having also prayed over it, carried it to the door, and placed it before the burning match. He then consecrated a cup of sam-tchoo in the same manner, and placed it by the side of the rice; again knelt before them, and having prayed for some minutes, emptied both cups upon the altar, and rejoined his brethren. During the consecration, the whole company of bonzes chaunted in measured time, and appeared to be regulated in their pauses by a man who every now and then struck the wooden head occasioning a ringing sound. Having continued on their knees for some time, they suddenly arose, and forming into two lines marched chaunting several times round the temple, and then dispersed.

Near the temple was a library of religious books, containing the doctrines of Fo, descriptions of local ceremonial observances, and figures of the idols in very correct outline; and attached to the library was an office in which they were printed. Nothing could be more simple than the method of printing which I saw practised. On a piece of wood about two feet square, carved into the necessary characters, and covered with ink, a thin paper was laid, which having been pressed down by the hand, received the desired impression. The use of moveable types in wood is confined to the printing of the Pekin Gazette and a few other periodical works. All others are

printed in stereotype. The use of moveable metallic types may perhaps, at no distant period, become general in the empire, as a manufactory of them in block tin is already established at Macao for the use of the British factory. The casters and cutters are Chinese, who execute their work with great precision and despatch.

About ten o'clock on the morning of the twentieth of January, His Excellency, accompanied by his suite, embarked in his barge; and, attended by the boats of the Alceste and Lyra and of the other British ships then lying at Whampoa, took leave of the city, of Canton.

The Viceroy's curiosity induced him to station himself in his yacht near the spot where he expected they would pass, for the sake of witnessing the procession; but finding the boats taking a direction not likely to give him an opportunity of effecting his purpose, sent his card to the Ambassador requesting him to steer nearer to his yacht. His Lordship returned the card and directed Captain Maxwell to continue his course.

About four o'clock the Embassy reached the Alceste, and early the following morning got under weigh, and passing the batteries at the mouth of the river received their successive salutes.

As we passed down the river, a large number of pigs, which formed part of some imperial supplies to the ships, died and were thrown overboard, proving rich prizes to many Chinese, who in small boats attended the ship to pick up any animal or vegetable matter that might be ejected from them. On obtaining a carcase they immediately cut it up, washed and salted it, and no doubt sold it to other European ships as prime meat; not because they disliked such food, for no disease disqualifies the carcase of an animal for the butchers' shambles in China, but because they considered the entrails delicious fare.

The Chinese are less fastidious than perhaps any other people in the choice of their food, feeding on those animals which amongst other nations are considered unclean, and upon the parts of animals which are usually rejected with disgust. They prove indeed that the

means of human sustenance are much more numerous and widely diffused than is commonly supposed. The wealthy, indeed, live upon food which all over the world would be considered wholesome and luxurious; and of the kinds of meat consumed by other nations, like beef the least and pork the most; to these they add venison, sharks' fins, bêche de mer, and birds' nests bought at enormous prices. The middling classes live chiefly upon rice and on pork, which we found the best meat in China: horse flesh is eaten by the Tartars, and is sold in the markets at a higher price than beef. It has been justly remarked by some writer, that it would be much more difficult to say what the lower class of Chinese do not, than what they do eat. Dogs, cats, and rats, are exposed for sale in the markets, and eaten by those who can afford to purchase other food. In a shop at Ta-tung the same price, about eighteen-pence, was asked of one of the Embassy for a pheasant and a cat. In a country where a dreadful destruction of vegetable food is sometimes produced by the ravages of locusts, it is fortunate if the inhabitants can find nourishment in the bodies of their plunderers; and that such is the case in China, where, according to the statement of various writers, swarms of locusts in some provinces often eat up every "green thing," is not improbable, as our boatmen considered grasshoppers roasted alive a very delicate repast.* The ordinary nutriment of these people, like that of all the lowest class of Chinese, was what Adam Smith has fitly called the "nastiest garbage." They fattened on the blood and entrails of the fowls killed in our boats, and eagerly seized the vilest offals that could be rejected from a slaughter-house; and when these could not be obtained, ate rice or millet, seasoned with a preparation of putrid fish that sent forth a stench quite

* The species which they were seen most generally to eat was the *Gryllus nasutus*.

intolerable to European organs. The Chinese, as De Guignes has remarked, are utterly insensible to bad smells.

Before I take leave of China, I should be glad to state what is the impression on my mind with regard to the natural character of its people, but find it very difficult to form any conclusion respecting it, even to my own satisfaction. Persons travelling in a country in which they are looked upon by the government as objects of jealousy, and by the people as beings in all respects inferior to themselves, must have continually to contend with prejudices likely to defeat their attempts at forming a correct estimate of the inhabitants. With the higher or better informed classes of society, for they are essentially the same in China, we had very little intercourse that was not purely official or ceremonious; and on all these occasions found them so cased in the armour of form that it was impossible to reach their natural character, or to depend on their information as the simple statement of matters of fact. My own opportunity of conversing with a man of rank, I have already had occasion to mention in the course of this work, and at the same time to point out his proneness to falsify. He seemed only anxious to please the person he was conversing with at the time, with very little regard to veracity. Our most extensive intercourse was with the trading part of the community, of whom I have little to add to what I have before stated, namely, that in their dealings with the Embassy they generally proved themselves cheats when their interest did not compel them to be honest. It is but fair, however, to remark that the principle of cheating is so legitimated amongst them by the general practice and toleration of their countrymen, as to be considered rather as a necessary qualification to the successful practice of their calling, than as an immoral quality. In some instances, I found the love of gain curiously contrasted with a ready disposition to give. Those who had exacted from me with the greatest pertinacity all they could obtain whilst bargaining with me in their shops, would

freely give me their much valued plants that decorated their court yards. On the banks of the Pei-ho, after purchasing of an itinerant salesman, under the usual circumstances, some trifling article, I stopped to examine a well wrought chain apparently of silver, from which his little apparatus was suspended: he immediately unfastened, and begged me to accept, and was evidently much mortified at my refusing it.

Of the middling class of people, if such there were distinct from that of the mercantile, we had no opportunity of judging, excepting as they might form a part of the crowds which surrounded us in the neighbourhood of towns and cities. In these assemblages, an eager curiosity assimilated the characters of the whole mass.

Amongst the lowest orders of Chinese abject penury appeared to have extinguished most of the qualities which distinguish man from inferior animals, save that of national importance, for even these people prided themselves on being members of the "celestial empire."

In the peasantry alone, were we likely to find any approach to what might be called the radical character of the people; and as far as my experience has gone respecting it, it is all in favour of its simplicity and amiableness. Before my unlucky illness, I was often enabled to get amongst them apart from my friends and usual attendant soldiers, and always found them mild, forbearing, and humane.

Respecting the validity of those general charges of inhumanity brought against the whole Chinese people, and founded on their reputed practice of infanticide, and their apathy in withholding assistance to their countrymen when in danger, my information is chiefly of a negative kind. It will readily be supposed, that in our almost linear progress through the empire, we were not in the way of obtaining a sufficient number of facts for estimating the different degrees of credibility attached to the statements*, according as little

* The late Sir George Staunton estimated the yearly amount of infantile exposures in the city of Pekin alone at 2000, Mr. Barrow at 9000, and many of the Missionaries still higher.

on the subject of infanticide as on that of population, respecting the causes and extent of the exposure of children in China. But granting that any of these statements are well founded, it will scarcely be believed, that, in passing over its populous rivers through upwards of sixteen hundred miles of country, we should meet with no proofs of its mere existence; yet such has been the fact, for not even that very equivocal and variously explained circumstance of infants supported above water by gourds fastened to their necks*, fell under our notice, nor indeed any other that could lead to a belief of its practice. The experience of De Guignes, whom I have so often quoted, and of whose accuracy we all had frequent proofs, was of a similar nature. He has had occasion to declare that in his route through the whole extent of China, in travelling by water he never saw an infant drowned; and in travelling by land, although he had been early in the morning in cities and villages, and at all hours on the highways, he never saw an infant exposed or dead.

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* As the different modes of accounting for the fact that children are sometimes found in China floating in the water, with gourds round their necks to prevent their sinking, afford an illustration of the difficulty of arriving at precise information respecting infanticide in China, I subjoin the following quotations: "Il faut pourtant que nous disions un mot de ces enfans qu'on jette dans la rivière après leur avoir lié au dos un courge ouide, de sorte qu'ils flottent long temps avant d'expirer. . . . . Ces infortunés enfans sont des victimes offertes à l'esprit de la rivière, d'après des oracles, en vertu d'un sort, ou en executive d'un dévouement." Mémoires concernant les Chinois, tom. ii. p. 400.

"Those whose constant residence is upon the water, and whose poverty, or superstition, or total want of sensibility, or whatever the cause may be, that leads them to the perpetration of an act against which nature revolts, sometimes, it is said, expose their infants by throwing them into the canal or river, with a gourd tied round their necks, to keep the head above water, and preserve them alive until some humane person may be induced to pull them up." Travels in China, by John Barow, p. 170.

"Quant à ce que l'on dit qu'elles attachent une calabasse sur le dos des enfans pour les faire flotter plus long-tems, afin de donner le tems à quelque personne charitable de leur sauver la vie, elles ne le font que pour avoir elles-mêmes le moyen de les secourir dans le cas on les tomberoit à la rivière. J'ai été témoin d'un pareil accident; la mère loin d'abandonner son fils a son malheureux sort, ne fut tranquille que lorsque elle le revit dans ses bras." Voyage à Peking, tom. ii. p. 289.

The tales of Chinese infanticide had made me very watchful for every circumstance that could illustrate the ordinary state of those feelings that must be violated in its commission; and had certainly led me to look for a lower degree of parental affection in China than in other countries. Under this impression I recorded in my journal many examples of parental tenderness, which now appear almost too trivial to mention. I may be permitted, however, to state, that in the multitudes who often assembled about us, I have repeatedly seen parents in the lowest rank of life expose themselves to the lashes and insults of the soldiers in defending their children from the pressure of the crowd; and that whilst I often witnessed all the acknowledged proofs of the existence of this principle in its perfection, I on no occasion observed an instance of its defectiveness.

That infanticide is practised in China, especially in times of dreadful scarcity, to which, from the nature of the government, and the corruption of local officers, that country is peculiarly subject, the concurring testimony of many authors scarcely admits of a doubt; but that it ever materially affects the amount of population, and still less that it ever depends on any general want of that divine and uncontrollable principle which guards the safety of offspring, the entire absence of all evidence, within our experience, even of its mere existence, does not allow me to believe. From all that I was capable of observing, and from all that I was enabled to learn, I am quite of the opinion expressed by an eloquent writer, "That when the parent has any possible means of supporting his offspring, there is no country where maternal affection is stronger than in China."*

Regarding the alleged indifference of the Chinese to the fate of a fellow-creature struggling for life, of which Mr. M'Leod has had occasion to record a frightful instance in his voyage to Lew-chew, but

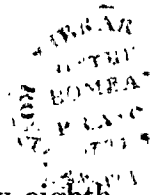
* Lord Macartney's Journal of an Embassy to China.

who has omitted to mention that he was himself mainly accessary in preserving the lives of those that were saved; it is but justice to recollect, whilst we admit the facts, that they occurred in a country where an ineffectual attempt to save the life of another, under the slightest shade of suspicion, is followed by the punishment of death.

The Alceste having anchored off Maçao on the morning of the twenty-third, the Ambassador and his suite landed on the same day, and again experienced the hospitality of the Factory, who gave up their houses for their accommodation. The Portuguese governor, like his superiors at Rio Janeiro, abstained from showing the Ambassador any attention, and for the same alleged reason—the death of the Queen of Portugal.

The town of Macao offered nothing to our observation that is worthy description. The country in its neighbourhood is full of rare plants, of which the *nepenthes distillatoria* is one of the most singular. The rocks of the neighbouring islands consist of a very large-grained granite, contain masses of shorl, and are remarkable for groups of crystals of felspar which often occur separated from the other constituents.

CHAPTER IX.



The Alceste left Macao roads on the evening of the twenty-eighth of January, and shaping her course for Manilla, made Point Capones on the second of February; and having beaten into Manilla Bay during the night, anchored the following day about noon at the distance of a mile and a half from the town. The Embassy landed the same afternoon on the northern bank of the river which flows past Manilla in a suburb opposite the city, and found themselves in the midst of a crowd occasioned by a procession in honour of the purification of the Virgin. This festival falls on the preceding day in our calendar, as the Spaniards of Manilla continue to adopt a system of reckoning time which the first discoverers of the Phillippine Isles established.

A scene that presented itself to us on landing produced a favourable impression on our minds as to the wealth and population of the colony. A great number of the better classes of both sexes, chiefly in European dresses, were driving about in open carriages drawn by sleek and high-mettled ponies bred on the island. Amongst the pedestrians were many of the inferior clergy, distinguished by their large cocked hats with long tassels before and behind. The mass of the crowd was made up of the half casts; of whom, both men and women were remarkable for their well proportioned figure and erect gait; the latter especially being tall, very finely shaped, and having a dignified carriage. Their dress was well adapted to the climate, and admitted the freest play of their limbs; consisting of a loose linen tunic, which scarcely reached the cabaya, or em-

broidered petticoat, wrapped round the waist. Their long black hair was worn in a knot on the back of the head, or partially concealed by a transparent handkerchief, of the manufacture of the country, which was fastened above the forehead and allowed to flow freely over the back of the head. Their slippers, worked with silver or gold thread, being unconfined to their feet, caused a kind of sliding walk. The dress of the men consisted of a pair of pantaloons and a loose shirt, of the cloth of the country, which descended below the knees, and had a stiff worked collar; and was rendered unbecoming by a large round straw hat with a very high and wide crown.

The whole crowd of equestrians and pedestrians was pressing anxiously forward to meet the procession, when the bell of an adjoining convent proclaimed the hour of sun-set. In a moment every foot paused, and every sound was hushed. Looking around, we saw every head uncovered and every person wrapped in silent prayer. The bell ceased, and all again moved on, and seemed to resume their interrupted trains of thought. In a few minutes the flashing of torches announced the approach of the procession. The image of the Virgin, enthroned in a canopy of flowers mingled with tinsel, which reflected the light of tapers borne by attendant monks in robes of white and grey, was the only object which I could distinctly observe. My imagination went back to the processions which I had so lately seen in China at funerals and marriage festivals; and I could not but regret that the ministers of the pure religion of Christ, and those of the vilest idolatry which disgraces human nature, should endeavour by like methods to influence the minds of the people. Turning away, we walked towards the shore; and on our road partook of some refreshment at a small shop kept by three Indian girls who seemed not a little surprised at seeing persons of the apparent rank of their visitors on foot; for in Manilla a pedestrian of respectability is an uncommon spectacle.

The next morning His Excellency, accompanied by his suite,

entered the city of Manilla on a visit to the governor; and having passed through some long gloomy streets with houses of one story, lighted by oyster-shell windows, reached the palace. We were received in a large unfurnished room with unaffected politeness and a cordial welcome by Don Mariano Fernandes Folgarez the Governor, who proffered us every kind of civility for the time we should remain at Manilla, and invited all the members of the Embassy to dine with him next day. On leaving the city, which appeared strongly fortified, the Embassy passed over a draw-bridge into the suburbs, impatient to see the inhabitants, of whom they had caught but an imperfect glimpse the night before. The mulatto women lost something of their attractions when seen in open day, not from their appearing less comely, but from their carrying in their mouths immense cigars. Many of these were seven or eight inches long, and an inch and a half in diameter; of such magnitude, indeed, that the mouth seemed scarce large enough to grasp them. When they were fully light, and pouring fourth volumes of smoke, they might have been taken for chimnies to machines rendered locomotive by the powers of steam.

The manufacture of cigars affords employment to a great number of native women, and exhibits to the stranger an interesting example of local customs. It is carried on in a spacious gallery of a square form. Upwards of two thousand females of all ages are seated at low tables at which they make cigars by rolling the leaves of the tobacco plant on each other. The most scrupulous precaution is taken to prevent their smuggling it in any form. Superintendants walk round the tables and collect the cigars as they are made, and examine the persons of the workers at the close of their labour. This process, for an account of which I am indebted to Captain Basil Hall who witnessed it, is rather singular. Thirty women, for the most part elderly, and thought particularly trustworthy, seat themselves, excepting one, round a circular landing-place without the entrance to the gallery. One only stands

at the door of the gallery with a rattan in her hand, and allows thirty girls to enter, counting them off as they come in. When the thirty have passed, they go up to their respective examiners, and having freed their long black hair, hold it in their hands at arm's length; they then shake their handkerchiefs and loosen the other parts of their dress, and suffer the examiners to pass their hands over their bodies to ascertain if any tobacco be concealed close to their persons. In this manner successive parties are searched, till all the girls have undergone the examination. The examiners then rise, and in the same way examine each other.

The government monopolizes the sale of tobacco, and, to keep up its price, is said to destroy the extra produce of a very fertile season.

The suburbs of Manilla are principally composed of houses built, in the native manner, of matted bamboo for the walls, and the leaves of the palm for the roofs, mingled with houses of stone, with churches and convents. The bamboo dwellings are inhabited by the mulattos, called mestis, natives and Chinese, all of whom, especially the mulattos and Chinese, are the tradesmen of the place. None of them stand very high for honesty, but the Chinese maintain their character for pre-eminence in cheating. *

The Chinese are charged with various crimes, are watched with much suspicion by the government, and are as cordially hated by the natives of Luconia as by the Javanese. They at least have their share of punishment. Two of them, and a native, were executed for the crime of murder during our visit at Manilla. The malefactors were strangled by a method peculiar and frightful.

* It is but justice to make an exception in favour of some of the mulatto women, who are said to be the chief negociants of Manilla, and yet give no other security for their purchases than their words, for a credit of two years. The author of the Voyage aux Indes Orientales states, that he has known a mulatto woman furnished with merchandize to the amount of two hundred thousand dollars, with no other security than a verbal promise, which she has kept with the utmost fidelity. — Vol. II. p. 347.

A frame-work, furnished with a number of iron collars at the height of the neck of a man of ordinary stature, when sitting, is placed in the most public square in the suburbs, having in its front a number of stools of variable elevation, like the music stools of this country, to raise or depress the culprit. When the unfortunate wretch is brought to the requisite height, the collar, always much too small, is put round his neck, and by a screw behind is tightened with sudden violence. The execution usually takes place in the morning soon after sun-rise, but the bodies are not removed till sun-set.

In accepting the invitation of the Governor to dinner, the Embassy had an opportunity of seeing many of the most respectable of the colonists, and found that the stateliness usually attached to the Spanish character, entered in no degree into their polite standard of manners. We sat down at two o'clock to a sumptuous board, of which the *Olla podrida* was not the least attractive ornament. Mirth and temperance presided, although sometimes chequered with clamour. Two of the party, an Andalusian and Gallician, asserted their respective superiority in the art of salad-making, and in their loud appeals to the company seemed to use more earnestness than the occasion merited. One of these gentlemen was master of the ceremonies wherever he appeared, and seemed well adapted for managing the gay frivolities of life. He was grand carver at the Governor's table, and chief beau at the ball; and whether eating, drinking, or dancing, was pre-eminent in action. In the discharge of the duties of his official situation, all Manilla said that he equally excelled; and that he was behind no one in hospitality to strangers all the Embassy can testify.

Shortly after dinner the party adjourned to another room, and partook of coffee, tea, and cigars. About five, in conformity with general custom, they drove out in carriages upon a broad road that winds round the city. Soon after sun-set they returned to the Governor's, and were now joined by his two daughters and other ladies, all dressed in the European style. The evening concluded with music and dancing.

On the following morning I joined a party of friends on an excursion to the village of Los Bagnos, on the southern bank of a celebrated lake called Laguna de Baie. This lake is situated to the east of Manilla, and is stated to be forty-five leagues in circumference. Its waters are fresh, and empty themselves into the sea by the river Passig. This river is navigable at all seasons of the year to very heavy boats, and flows about twenty miles before it reaches the Bay of Manilla.

We left Manilla in a felucca provided by the Governor, and which was rowed by sixteen natives, who used the slow majestic manner of the Spaniards, rising on their feet at every stroke. The scenery on each bank of the river was replete with romantic beauties, and greatly resembled that of Java. Palms and bananas, mingled with trees of a more umbrageous character, surrounded the wattled bamboo huts of the natives, supported on piles some feet from the ground. They are guarded by this construction against the effects of inundations which sometimes occur from the overflowing of the river and lake; but being built entirely of wood, are very liable to fire, especially as every native keeps it in some shape or other in his dwelling for lighting his cigar. Widely spreading conflagrations often occur and consume whole villages in a few hours. A very singular effect is said to be then produced by the air confined in the joints of bamboo, becoming expanded by heat, and bursting them asunder and scattering them in all directions. The same circumstance, however, which renders them so capable of destruction, makes the calamity less severe, as a bamboo hut can be erected in a few hours.

When these dwellings were so numerous as to form a village, a principal building was seen rising above them, sometimes distinguished by a gothic spire, and sometimes by a crucifix. Gothic spires and gothic arches, formed of bamboo, are common on the island, introduced, it might be supposed, by Europeans; but, according to all accounts, they are purely native, excepting the cross which usually surmounts them.

In our passage up the river, we passed many of the canoes of the natives formed of the hollowed trunk of a tree, about twenty feet long, two wide, and one deep. These have sometimes an awning extending almost the whole length of the boat, formed of the plaited leaves of the palm, supported on six posts; and on the bottom, an elastic platform of split bamboo, on which passengers can recline at full length. A very thick entire bamboo always passes along the outside of the gunwhale, which, offering an increased surface of great buoyancy to the water when the canoe heels over, prevents its upsetting. These canoes are often shaped like a fish, having the head and stern carved to represent its head and tail, and the body rounded to the shape of its belly. They are rowed by four paddles, and make great way even against a strong current.

On approaching the lake, we found the country low and marshy, cut by innumerable rivulets, and in many places flooded. Herds of buffaloes, of a pale blue colour and little hair, with very long curved horns turned back close to the head, were crossing the river, having the nose and eyes alone above the water. Little boys, on these occasions, often stand on the backs of the headmost animals, holding by a string fastened to their heads, and in guiding them guide the whole herd.

The stream of the river having been strongly against us, we gained the entrance of the lake too late to reach Los Bagnos that night, then distant about thirty miles, and therefore directed our course to the Convent of Benangonan, situated on its bank. The lake, soon after leaving the river, exhibited an expanse of water which seemed to justify the calculation of its reputed extent. So great indeed was its breadth, that its boundaries were very ill defined, although many of the circumjacent mountains are high. The surface was covered with wild fowl too shy to allow our obtaining any shots. The bamboo nets, or rather fences, used by the natives for taking fish, were very numerous, and must render its navigation in the dark very dangerous. They are mere bamboo mats fastened to poles, and placed upright in the water,

and so united as to form a kind of labyrinth from which the fish, having once entered, cannot disentangle themselves.

A dark night prevented our seeing the scenery in the neighbourhood of the convent of Benangonan. We landed on a kind of pier near a mound of stone, on which was erected a huge cross in front of a court that led to the convent. The guide who accompanied us having made known to its inmates that we were travelling under the protection of the Government, obtained for us immediate admittance. We were received by an Augustine friar, who led us into the refectory of the convent, and informed us that the Superior was absent, but would soon return. The convent, like most others in Luconia, was capable of lodging a great number of monks, but appeared to contain only two Augustine fathers. Our host, seemingly about forty years of age, something below the middling height, and rather corpulent, conversed with us in Latin, and finding one of the party was a medical man, begged his advice for a complaint which he endeavoured to express by laying his hand on his stomach, and exclaiming repeatedly, "*fames habeo.*" As his plump figure, ruddy complexion, and laughing eyes, seemed to forbid the supposition of real disease, we were disposed to believe that he had some other object in view than obtaining medical advice. When he found, however, that "*fames habeo*" did not render his complaint intelligible, he went into other symptoms, and when he had obtained a prescription was satisfied.

In about half an hour after our arrival, the Superior came in. He was a tall majestic figure, and entering enveloped in his cowl and leaning on his staff, presented an admirable subject for the pencil. When freed of his cloak, he exhibited a countenance of intelligence and feeling. He welcomed us cordially, and immediately gave directions for our supper and beds. He had been, he said, on a visit to the Indians of his neighbourhood, some of whom were dying, and others dangerously ill of an epidemic disease that had been some time prevalent on the island, and peculiarly fatal to the natives inhabiting the shores of the lake. One of the alleged

causes of the distemper was, a quantity of fish, which had been thrown upon the shores of the lake by the force of a hurricane, and had remained till they became putrid. A more probable cause of its fatality to the natives, was their refusing to use the means successfully employed by Europeans for its cure. St. Croix indeed states, that the Laguna de Baie communicates with the volcanoes of some of the surrounding mountains; and mentions, in proof of his assertion, that "during the summer of 1808 a great quantity of dead fish appeared on the surface of the lake, giving to the waters a fetid odour, and rendering them undrinkable." He adds, that they followed the course of the river Passig in such immense quantities as almost to fill its bed, and to cause the apprehension of a plague at Manilla; and supposes their mortality to have been the consequence of the water having been strongly impregnated with sulphur.*

Whilst conversing about the disease, the chorus of distant voices drew us to the window of the convent. A procession of Indians by torch-light, headed by a native priest, was approaching the church of the convent, forming one of the sides of the quadrangle in its front, to implore the removal of the distemper. The half-illumined figures of the Indians, their far projected shadows, the gloom of the surrounding scene, the large cross occasionally but faintly disclosed by the gleam of the torches, and the dashing of the lake upon the shore

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* Ce lac parait avoir quelques communications avec les volcans des montagnes qui l'environnent. Une des preuves les plus fortes qu'on en puisse donner, c'est qu'en 1800, on vit, pendant les chaleurs, une très-grande quantité de poissons morts sur la surface du lac, dont les eaux cessèrent d'êtres potables, et avaient une odour fetide et corrompue. Le grande nombre de ces poissons qui suivaient la cours de la rivière, fit craindre la peste à Manilla ou tout ou moins une épidémie. Une chose digne d'être remarquée, c'est qu'une très-grande quantité de ces poissons n'étaient pas entièrement morts; le corps paraissait conserver du mouvement et de la sensibilité, lorsque la tête etait déjà en putréfaction. Le lit de la rivière en était rempli, tant le nombre en était prodigieux. On jugea que, dans la communication du volcan avec le lac, il s'était répandu beaucoup de soufre, et que c'était une des principales causes de cette mortalité; les eaux en étaient très-fortement impregnées. Je ne me permettrais pas de rapporter ce fait, s'il n'était avéré par tous les habitans de la colonie et par les procès-verbeaux que j'ai eus entre mes mains. — Voyage aux Indes Orientales, par M. Felix Renouard de Sainte-Croix, tome ii. p. 217, 218.

heard in the pauses of the hymn, associated with our recollections of the romantic tales of our earliest days.

An excellent supper of boiled fowls and Spanish wine prepared us for our beds. The invalid did not appear at table, but received his fair proportion of our fare in a separate apartment. Having been refreshed by a few hours' sleep, we started soon after midnight for the hot baths, and reached them about six o'clock in the morning.

As we approached the shore, now lightened by the rising sun, the beauties of the lake opened upon us in great splendour. The village of Los Bagnos stands in a recess of the shore, surrounded with conical hills rising above each other and clothed with a dark foliage chequered with patches of vivid green to their very summits. The same hills formed part of a series which winding on our right and left, formed one of the boundaries of the lake, and gradually vanished in the distance. The sun, as he rose above the hills, shed his rays on the glassy surface of the water, and disclosed an expanse resembling a sea in extent, and only broken by a beautifully wooded island that seemed to rest like a bird upon the waves.

We landed opposite a small convent in a state of great decay. On our left was the native village of bamboo huts raised. On our right were some small round buildings with doomed roofs, enveloped in the steam which issued from them. Steam was also rising in several places from the woods at their back, and might have been supposed the smoke of cottages buried in their shade.

Impatient to examine the objects around us, we hastened to the convent, and after some time awakened and astonished its inmates. It was inhabited by one of the native priests, and one or two females of rather doubtful relation to the worthy father. Having passed through a large lumber room and up a ladder, we entered a spacious apartment furnished with a large table and a few old chairs, and communicating at one end with the chapel, and at the other with the dormitory of the establishment. From the latter came forth, on our entrance, the clerigo, in person and dress so

grotesque, as to tax our risibility very severely in avoiding to offend him by our mirth. Imagine a figure little more than five feet high, having a large head with black hair, projecting forehead with a wart in the centre that looked like the budding of a horn, pig's eyes, flat nose, expanded nostrils, wide mouth and thick lips, dressed in an old-fashioned suit of black cloth, without stockings, and his shirt hanging below his knees, rushing out wild with astonishment, and only answering with grins the questions put to him. When the excess of surprise was passed, he walked successively round each of the party, viewing him narrowly from head to foot, but at length was motioning us to be seated, when he found fresh occasion for astonishment. Mr. Griffith, the chaplain to the Embassy, had entered the room with a double-barrelled gun in his hand, and was now introduced as a brother clerigo. A protestant clergyman was, no doubt, in himself an object of great curiosity to one brought up in the extreme of bigotry, but a clergyman with a double-barrelled gun seemed to disturb all his notions of ecclesiastical propriety. He immediately went up to Griffith and examined him with great deliberation, walked round him again and again, and did not recover himself till repeated requests for refreshment induced him to depart. He soon re-appeared with shoes and buckles, and his shirt properly adjusted, and calling loudly about him, brought out one of his female associates, a very striking contrast to himself. With some of his peculiarities of physiognomy, she was tall, thin, and withered, decorated with crucifixes and other ornaments, and might have illustrated Smollett's description of the Indian wife of Lismahago. She had more self-possession than her friend, and speedily supplied us with some delicious chocolate, the famed produce and preparation of the island. Having drunk it, large glasses full of the coldest water that could be procured was, according to the custom of the country, handed to us. As the chocolate is taken very hot, a draught of cold water after it is a great luxury, and according to local report, very wholesome.

On visiting the hot springs we found several of them situated

nearly in front of the convent, and on the very margin of the lake. They rise bubbling through the surface, and forming small streams, unite in a torrent which flows into the lake. Round buildings with doomed roofs have been built over many of them to serve as vapour-baths; and the water of others are conducted into large tanks, which serve as open baths. These were formerly used as appendages to an hospital built for the use of the natives; but the baths are in ruins, and the hospital has entirely disappeared.

The construction of the vapour-baths was very simple, and had been probably well adapted to its purpose. On looking into them by a very small door, I found a floor formed by a bamboo frame laid over the hot spring, which had been formed into a well several feet in depth. It had been originally intended that the patient should stand on the bamboo, and thus be enveloped in steam; but this purpose could not be effected when I saw them, as the water rose above the frames, and was intolerably hot. There were three baths, which were all supplied, as far as I could judge, by the same stream, which having run under them and successively filled the respective reservoirs, passed off in a channel to the lake. The water of the bath nearest the source of the spring, raised a thermometer immersed in it to 174° of Fahrenheit, and the steam of the same bath to 108°; the water of the second bath raised it to 168° and its steam to 100°; the water of the third bath to 164° and its steam to 99°. Aided by a pair of thick shoes I ventured unto the bamboo in the bath of lowest temperature; and felt no other inconvenience than the sense of great heat on first entering, and was less sensible of this in a few seconds. My respiration was quite easy, and my pulse beat at 108 full and soft. I had only remained long enough to ascertain these facts, when the heat at my feet drove me away.

The temperature of one of the springs, at its source in the open air, was higher than that of any of the baths, being 180°. The lowest temperature of any of the springs was 120°. The temperature of a large stream, at its junction with the lake, was 168°. In

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bathing a few yards from the point of communication, we experienced a singular but pleasant sensation produced by an alternate flow of hot and cold water.

By far the most interesting and singular hot stream, in the hidden recesses of a wood, was discovered by the steam ascending above the trees in several directions, marking its devious course. It had worn a deep and unequal bed in a rock of compact lava, the surface of which it had rendered soft, and was overhung with trees of luxuriant foliage, and fringed with flowers of delicate hues. I did not meet with this rivulet, the temperature of which was 160°, till within an hour of leaving Los Bagnos, and could not therefore follow its windings and trace its source. It was with the greatest reluctance that I was compelled to quit a scene replete with more novelty than any that I had ever before witnessed. Let my reader picture to himself a smoking stream running with much force over a rocky bed, through a wood of umbrageous trees whose branches met above it, and he may form some slight notion of its very peculiar characters.

Sonnerat has stated, and his statement has been copied by other authors, that a species of fish lives in these springs. It is scarcely necessary to observe, that I was unable to verify this observation. All the animals which I saw in them, and I saw two, a small snake and a frog, were not only dead, but boiled. The same author states that a plant vegetates in them, and in this respect my experience partially accords with his. I found a small plant, apparently a species of *Arenaria*, vegetating in a soil that raised the thermometer plunged amongst its roots to 110°, on the side of a spring, the temperature of which was 120°.

The hot springs were so mingled with others of the temperature of the surrounding atmosphere, that it was easy to put one hand into hot and the other into cold water. St. Croix states that some of the springs, near their source in the mountains, have a very strong taste of copper. I could discover no metallic flavour,

but observed an ochreous film floating on the surface of some cold pools; and a deposit of the same kind on the banks of one or two of the hot springs.

It is said that the craters of extinguished volcanoes exist in the neighbourhood of Los Bagnos, and contain a considerable expanse and depth of water, the habitation of enormous alligators. That the mountains chiefly consist of lava is probable, as the shores of the lake are composed of black sand, the debris of compact lava, and because the bed of a large river which runs into it is interrupted with blocks of the same rock.

The woods are very thick, and seem to have been but little trod by man, and abound in magnificent plants. The unwearied search of three persons, in a small space within the immediate precincts of the convent, from early in the morning till late in the evening, was far from exhausting their numerous species.

The trees which characterise the scenery are different species of palm, especially the coco nut, *Cocos nucifera*, and the areca nut, *Areca catechu*, and the *Nipa fruticans*. Of other trees the more general and conspicuous were the teak tree, *Tectona grandis*, a very large non-descript species of *Ficus*, the jack fruit *Artocarpus incisa*, and the bread fruit *Artocarpus integra*, the *guava* and *mango*. Of the less prominent, two species of *mimosa*, with white and yellow flowers, were very abundant. Of other plants, I find remaining to me references to specimens of the genera *Asclepias*, *Bauhinia*, *Cordia*, *Hedysarum*, *Hibiscus*, *Justicia*, and *Poinciana*. On the walls of the convent a *Justicia* with yellow flowers grew in the greatest profusion. The *Justicia bicolor* was a very common plant on the margin of the woods, and the *Vinca rosea*, of great size and beauty, was the plant of waste ground not only in the neighbourhood of the convent, but in every place that I visited on the island.

A considerable plantation of a species of *Musa*, from which the natives obtain two sets of fibres, the one fine for manufacturing the *nippis*, the other coarse for making cordage, grew near the village of

Los Bagnos. The nippis is a beautifully clear fabric, which forms the outer shirt-shaped garment of the native men, and the tunic and handkerchiefs of the women. It is said to be sometimes made of fibres so fine that they require to be manufactured under water, because if exposed to the sun and air they become too fragile to work. The cordage made from this plant is less prized in the Philippines than that manufactured from the fibres that grow near the roots of a palm, and are of a black colour, forming rope called *cabo-negro* by the Spaniards, by which name the palm itself is also known. The cordage is black, and strongly resembles horse-hair. The palm is no doubt the *anau* of the Sumatrans, which Mr. Marsden informs us "is the *Borossus gomutus* of Loureiro, the *Saguerus pinnatus* of the Batavian Transact. and the *Cleophora* of Gærtner."*

Late in the afternoon the arrival of the Ambassador, Mr. Ellis, and Captain Maxwell, giving the clerigo fresh occasion for astonishment, he again repeated his circumambulations. At the table of His Excellency, at which he was with much difficulty induced to take a seat, he gained himself a higher place in our estimation by his readiness in giving a complimentary turn to his answers when questioned by the Ambassador. Whilst thus situated, his female companion and a young girl stood apart at some distance, and seemed as much amused with his grotesque appearance as any other of the party, expressing their emotion by the most immoderate fits of laughter.

Having passed the night the greater part of us on benches and tables in the refectory, or in the chapel surrounded by the images of the virgin and of the saints, we again embarked on the lake, and after a very boisterous passage arrived at Manilla the same evening, and immediately went on board the Alceste.

Early the next morning we left Manilla Bay with a favourable breeze, and were out of sight of land before dark. On the 16th we

* Marsden's Sumatra, p. 88.

made the Great Natunas, and the next day passed the Timbelan Islands, and that night discovered Gaspar island, having run about one hundred and sixty miles a day in nearly smooth water. Expecting to be in the straits of Gaspar the next morning, I rose early to ascertain our situation, and looking from my cabin window, saw Pulo-Leat, a finely wooded island close on our larboard beam. The morning was fine, the wind was fresh and favourable, and the vessel was moving rapidly through the water; every appearance promised a rapid passage through the straits which we had just entered. I had scarcely withdrawn, when a violent vibration of the whole ship, accompanied by a rumbling noise, urged me again to look out; the vessel no longer moved, and the waves beat against her like a rock. She had struck on a coral reef*, and having grated over it for a few seconds, heeled slightly over to the starboard side and settled upon it. On deck, where I instantly hastened, every countenance told the distressing truth. A dead silence prevailed for some moments, every man retaining the posture in which the disaster found him, till Captain Maxwell, by his orders, roused the suspended faculties of all. "All hands on deck to shorten sail—man the pumps—clear the best bower anchor," were the almost simultaneous orders. An attempt was then made by throwing the sails aback to drive the ship off the rock, but in vain. The rapidity of her motion at the instant of striking, rendered it highly probable that she had received serious injury; but every doubt on this subject was soon removed by the appearance of large portions of the keel floating alongside, and by the report of the carpenter. He had sounded the well, and found two feet and a half water, and soon after seven feet, and that it continued to gain rapidly. Every sail was now taken in, and the anchor was let go to keep the ship upon the rock, from the apprehension, if she went off, of her instantly sinking. Some bread and powder were then attempted to be saved;

* In a chart by Captain Lestock Wilson, the track of his ship Vansittart passes over the very spot where the Alceste struck, and eighteen fathoms water are marked in the same place.

Drawn from a sketch by H. Raper Esq.

T. Fielding Sculp.

VIEW OF THE LANDING PLACE AT PULO LEAT

Published by Longman, Hurst, Rees, Orme & Brown, London, Oct.r 1st 1817

LIBRARY OF THE ROYAL BRANCH OF THE ASIATIC SOCIETY

but before they could be reached, the magazine and bread-room were under water.

At this crisis, when our safety hung probably on the most feeble chance, no disorder prevailed; every man did his duty calmly, diligently, and effectually. The boats being cleared and lowered, the Ambassador, his suite, and part of his guard, within half an hour after the striking of the vessel, were in the barge, and making for the nearest point of land, distant about three miles. After leaving the vessel we saw more accurately the dangerous nature of her situation. The reef on which she had struck was distinctly seen from the boat extending a few yards from her. Beyond, the water was dark and deep, and continued so for nearly half a mile, and then became so shallow that the beautiful but fatal coral was continually seen as we approached the shore. When about a mile from the land, sunken rocks covered by not more than from one to three feet water, surrounded us on all sides. The boat struck several times, but was saved from any serious accident by the skill of Lieut. Hoppner who commanded her. After sailing or rowing for about an hour, we gained what had appeared from the ship to be land covered with wood, but to our mortification discovered nothing but insulated masses of granite interspersed with trees growing in the water. The rocks being too small to receive us, and not appearing to be above high water mark, some men were sent forward amongst the trees to seek for land, but returned after a fruitless search.

Having been joined by the other barge, with the servants of the Embassy, we coasted along the shore in quest of a more convenient place for debarkation. Several creeks which seemed to penetrate inland were in vain explored, they all terminated in deep swamps. Similar attempts were reiterated, till anxiety to send back the boats for the relief of others on board determined His Excellency to land on the first rocks which should be found sufficiently large or numerous for the reception of the party. This intention was at length effected in a small bay, where the rocks were so mingled with trees as to afford firm hand-hold. Having with some difficulty

placed ourselves upon them above the rise of the tide, and having taken our fire-arms from the boats, they immediately returned to the ship.

Several gentlemen now went forward over the rocks, and soon returned with intelligence that land was not far a-head. A party was therefore dispatched to examine it more closely; and proceeding in the direction of the shore discovered a more convenient landing place, and a small hill on which an encampment might be formed. Several men were immediately dispatched to this place to fell trees, and to clear a space for the reception of persons and baggage; and a marine was stationed on a projecting rock to direct the boats to the new landing-place as they successively approached the island.

We had now leisure to contemplate some of the circumstances of our situation. Spars and planks, the remains of a boat, and the marks of fires scattered amongst the rocks on which we first obtained footing, indicated that other unfortunates had, at some period, found on the same island a doubtful asylum. The roots of trees intertwining with each other, and forming arches over a bog which exhaled a disgusting effluvia, formed the path from this place to the hill. No vestige of a human habitation was visible, and the discordant screeching of a bird alone marked the presence of any animated being. The heat of the day as it advanced, and the exertions of the men in clearing the ground, produced great thirst, and rendered it necessary immediately to seek for water, of which scarcely any had been saved. A search for this purpose was conducted in several directions without success; and night coming on, was relinquished in the hopes of better fortune on the morrow.

During the whole day, and till a late hour in the evening, boats were employed in bringing provisions and baggage from the ship.

At the commencement of the evening all those who had landed being assembled at the place of encampment on the hill, a table formed of boxes and hampers was covered with what provisions were at hand. The Ambassador, the gentlemen of his suit, and the officers on shore, sat down to a gloomy and unrefreshing meal;

the seamen were served with biscuit and rum, and the servants were supplied from the Ambassador's table. Exhausted by the fatigues of the day we were glad, soon after our repast, to seek some rest.

Nothing could be more mournfully picturesque than the scene which about this time presented itself. The place in which the table had been spread was a cleared space of about twenty feet square, in the midst of a wood on the declivity of a hill to which an avenue had been cut from the sea-side. It served as a sleeping ground to many of the party. At its extreme part towards the hill, the Ambassador's cot was suspended between two trees, its white curtains forming a curious contrast to the sable foliage by which it was surrounded. Along its sides and those of the avenue, hampers, trunks, bags, Chinese toys, and an endless variety of other articles were scattered in wild confusion. Reclined on the larger packages were the wearied seamen, whose jokes proved their insensibility to their situation, and were sadly contrasted with the moans of some sick men placed apart from their companions in recesses cut amongst the trees. The dull light of a few candles threw a meagre gleam over these objects, and scarcely showed to the cots and hammocks suspended amongst the trees, or strewn on the ground, the few who obtained them: the greater number of the party considered themselves fortunate if they found flags or blankets to defend them from the ground. Fires being lighted and sentries placed, to defend us from any possible danger, we laid ourselves down to watch anxiously for day-light. Captain Maxwell and a part of his officers and crew remained on the wreck all night.

Early the next morning the party rose with a painful thirst, and without the means of satisfying it, but many materially lessened it by bathing. Several detachments, headed by gentlemen of the Embassy and officers of the ship, started in several directions to dig for water; but returned, in different parts of the day, without having gained their object. Others, amongst whom was the author of this narrative, visited the ship by one of the first boats that returned to

her, and on their way met Captain Maxwell going on shore, where his presence was likely to be of the greatest service in establishing order amongst his men, and where his counsel was required respecting the best means of procuring relief from some neighbouring port. He expressed great concern that no water had been discovered on the island, as very little had yet been obtained from the wreck.

We found, on reaching the vessel, that she had heeled over so much on her starboard side, that it was very difficult to mount her quarter-deck by the larboard gangway. The topmasts had been cut away, some of the yards had been lowered, and others were taking down to form rafts for the conveyance of things on shore, and for the safety of those on board in the event of any sudden breaking up of the vessel, whose timbers threatened to give way about midships.

The noise, and the scene which prevailed on board, were inexpressibly awful. The wind was high and the swell of the sea considerable, and the vessel knocked fearfully against the rock. The rending of the sails, the rattling of the ropes, the splashing of the waves, the howl of the winds, the roar of the sea, and the shouts of the seamen, combined in horrid confusion. Linen, books, and all kinds of packages, covered the upper deck. The water rose to the main deck from below, and beat over it through the starboard ports. Pieces of furniture floated in every direction. The cabins, in which but two days before we had reposed in comfort and security, were either empty, or filled with motley lumber. One alone was an exception to this state. A collection of plants, seeds, and minerals, which had been made in China, was still in a great measure uninjured, but only mocked the vexation of the owner, who saw no chance of preserving it. Every one at the time being necessarily too intent on securing the means of general subsistence to attend to an individual's interests, it could only be recommended to the attention of the officer commanding on board, and by his directions was afterwards placed on a raft, which, with every thing upon it, was burnt by the Malays.

Whilst we remained on board, two casks of water floated up from

the bottom of the ship, and were immediately hoisted on deck. So invaluable a prize in our circumstances must have ensured, it will be imagined, all possible care; yet such was the inconsiderateness of the sailors, that they staved one of them in getting it over the side of the ship, through mere heedlessness.

The Ambassador, during our absence from the island, had resolved to embark with his suite in the barge, and with the cutter in company, to sail for Batavia that evening, for the purpose of obtaining as early relief as possible for his fellow-sufferers. Being informed of this arrangement by a message from Captain Maxwell, we hastened on shore. The barge had put off before we arrived, but waited for the cutter outside a reef about a mile and a half from shore.

After taking a hasty farewell of my friends, I went on board the cutter, and reached the barge about half-past six. She contained the Ambassador, the Hon. Mr. Amherst, Mr. Somerset, the gentlemen of the suite, Mr. Cook, captain of the guard, and Lieutenant Hoppner commanding the boat, fifteen seamen, four marines, and two servants; in all thirty-three. In the cutter were Mr. Mayne, master of the Alceste, Mr. Blair, midshipman, ten seamen, and three marines. Having been detained some time alongside each other in distributing arms and provisions, and in determining on signals and their mode of sailing, the boats got under weigh at seven o'clock, the cutter taking the lead.

The objects immediately to be attended to were the sunken rocks which stretched out a considerable distance from the shores, and the pirates who infested the seas and inhabited the islands in our neighbourhood. To avoid the first, we stood directly out to sea for more than an hour, and then having sounded in nineteen fathoms, steered a southerly course: to avoid the pirates, we endeavoured to clear land during the night.

At day-light the next morning no other land than the extreme point of Banca was visible. Our stock of provisions and water having been examined, a small allowance of each, with a proportion

of rum, was served out to the two boats. Of meat and biscuit we had enough to last on a short allowance to the end of our voyage, if it should prove at all favourable; but of water we had not more than seven or eight gallons for forty-seven persons. Of rum and wine there was a full quantity; but these were more likely to increase than assuage thirst, from which, considering our latitude, we were to expect our chief suffering. But our apprehensions in this respect were in some measure relieved about ten o'clock in the morning, by a heavy fall of rain, of which we caught seven or eight gallons by different methods. Having an awning over the after-part of the boat, we obtained a considerable quantity of the water which ran from it, but found it so strongly impregnated with paint as not to be drinkable. A blanket was therefore spread, and soon gave a bucket full: an inverted umbrella, which collected water as in a funnel, was also of great use.

At twelve o'clock at noon we were, by several observations, in lat. 3° 39′ South, long. 106° 39′ East, Batávia bearing S. S. W. distant 152 miles. A squall, which brought the rain, having been followed by a dead calm, the crews of the boats were immediately divided into two watches each, who rowed alternately. At the close of day the barge spoke the cutter and gave her an allowance of biscuit and rum, and a light, which had been obtained with the greatest difficulty by firing gunpowder on oakum.

At the approach of night a gloom stole over our spirits, and was considerably increased by the calm, which, calling for a great exertion on the part of the men, made us tremble for their strength, whilst it gave the probability of a long and painful voyage. To relieve them as much as possible, every person of the suite occasionally rowed, exciting by his example the emulation of the men; but the cheering exhortations of our gallant officer accompanying the strokes of his effective oar, was of more sensible advantage: "Never say die my lads," was a certain appeal to the energy and the pride of his men.

The calm continued all night, but a breeze which sprung up the

next morning enabled us, with the assistance of the oars, to make some way. At noon we found ourselves in lat. 4° 52′ 30″ S., long. 106° 45′ East, Batavia being distant 78 miles. The wind again failed us early in the afternoon, and did not spring up till the next day.

In the evening the whole party began to feel the inconvenience of their constrained situation, having been unable to get out of the sitting posture. One or two attempted to lie at the bottom of the boat, but were effectually prevented, by the feet of their companions, from obtaining any rest.

The following day at noon we were by observation in lat. 5° 35′ S., long. 106° 37′ E., Batavia bearing South 22° E. distance 38 miles. Our approach to land was marked by large trees floating past us covered with birds. At half-past three the cutter, which was two miles a-head of the barge, hoisted her colours, as a signal for land, which was soon afterwards distinctly seen bearing south-east, distant about ten or twelve miles. Every exertion was immediately made to gain it before night, but the land-breeze coming very strong off shore, the boats were obliged, about six o'clock, to come to an anchor. The men were at this time giving way very fast: their thirst was so intense that many attempted to relieve their suffering by drinking salt water; and one man was taken severely ill with pain in the head and delirium, and uttered the most lamentable cries.

About eight P. M. the breeze slackening, we again attempted to gain the shore by rowing; but were obliged by the weakness of the men, and the force of an adverse current, again to anchor about six miles from Krawang Point. Although so near the shore, this was one of our most uncomfortable nights. The swell of the sea was so great that the rolling of the boat scarcely allowed us to keep our seats; and our spirits, worn by anxiety and watching, were not in a state to encounter with composure any fresh inconvenience.

At day-light the next morning the oars were once more plied, and with better effect. Soon after shutting in Krawang Point, one of the men being observed drinking the water alongside, received a

severe reprimand. The poor fellow paid little attention to the expostulation till he had taken a hearty draught, and then swore "'twas fresh;" and fresh it proved, for we were now opposite the mouth of the Krawang river, whose waters, from their lower specific gravity, rolled on the surface of the sea. This unexpected and seasonable supply gave us fresh vigour; the men tugged lustily at the oars, and a sea-breeze springing up, every sail was set to a favouring gale. The masts of the ships in Batavia Roads were soon visible, and by half-past ten A. M. we were alongside the Princess Charlotte transport, of Whitehaven, and received by her commander, Captain M'Kain, with all possible kindness and hospitality. Our appearance on reaching his ship sufficiently indicated our misfortunes. Many of the party had lost their hats and shoes; scarcely one had a coat; the faces of several had been skinned by the sun, and al had beards of a week's growth. It would be in vain to describe our sensations at this fortunate termination of our voyage. They who have never experienced, for a considerable period, a painful anxiety under circumstances of danger and deprivation, can scarcely appreciate the feelings consequent on their cessation. But whatever were the emotions of our minds, or the wants of our bodies, their influence did not prevent the Ambassador from immediately attending to the relief of our friends on the island. It was ascertained, in a few minutes after our arrival, that the Honourable East India Company's cruizer Ternate, Captain Davidson, was then in the roads, and that she would probably be a fit vessel to dispatch to their assistance. Mr. Ellis, with his usual alacrity in the service of others, instantly volunteered to enquire into the business, and soon ascertained that she was well adapted to the service in view, inasmuch as she sailed well and drew little water; but he feared she was too small to hold the whole party, together with the luggage saved from the wreck. It was, therefore, determined that the Princess Charlotte should accompany her; and both these vessels sailed for Pulo Leat at day-break the next morning.

The Ambassador having learnt that the English Governor, the

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Gaspar Island
Alceste's Track
Wreck 18th February 1817.
Straights of Gaspar
Pulo Leat
Pulo Lefa
BANCA
Straights of Banca
Vansittarts Shoals
Lucepara Island
Day light 20th Febry
Squalls and heavy Rain
Noon 20th
SUMATRA
Tree Islands
Bank
Wind W. by S.
Track of
THE
Boats of the Alceste,
FROM THE
WRECK TO BATAVIA.
Reduced from a Chart by Mr J. Mayne,
Master of the Alceste.
Heavy Squalls
Thunder and Lightning
1 A.M.
British Miles.
5 10 20 30 40 50
Noon 21st
Brothers
Wind W.S.W.
North Watcher
Armuyden
Pruysen
Brewers
Noon 22nd
South Watcher
4 P.M. saw the land
9.30 P.M.
Day light fresh Water
23 D.
Zutphens Islands
Straights of Sunda
Edam
Caravang Point
10 A.M. 23 Febry
Anger
Bantam
Onderandi
Chi-kandi
Bolang
Tangran
Batang
BATAVIA
Mt Karang
Sirang
Pandiglang
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Honourable Mr. Fendal, and Sir William Keir, Bart., commander of the British forces in Java, had not quitted the island, dispatched letters to them, and to the Dutch Governor, Baron Van der Capellan, stating our situation. Mr. Cooke, who carried them on shore, soon returned with intelligence that boats were coming off to take us to Batavia. An aide-de-camp also arrived from the Baron with an invitation to the Ambassador and gentlemen of his suite to his house, and the offer of every supply our necessities might require. The boats arrived at four o'clock, and took the Ambassador and his suite on shore, where carriages waited our arrival to convey us to the house of His Excellency the Dutch Governor, with whom we dined; but through the active kindness of our English friends, did not find it necessary to accept of his proffered services to their full extent.

I have now related all those circumstances of the unfortunate wreck of the Alceste of which I was a witness. For the following brief narrative of the occurrences on the island, after the departure of the Ambassador, I am indebted to the Journals kept there by the Hon. Mr. Abbot and Mr. Brown, and to conversations with several other officers of the ship.

After the sailing of the Embassy on the evening of the 19th of February, provisions, baggage, and some water, were landed from the wreck, but the last in such small quantity that the utmost anxiety prevailed respecting the result of efforts then making to form a well at the bottom of the hill. But successive parties having toiled at it all night, Captain Maxwell was, before morning, cheered with the intelligence that water had begun to rise; and on receiving a specimen found it, although slightly brackish, very drinkable.

It becoming generally known at an early hour that water had risen to the height of three feet, a general rush was made to the well, and every thing capable of holding it put into requisition by the thirsty sufferers. They found the supply too small to afford them much relief, but received effectual succour in a heavy fall of rain, the same probably which had reached the barge. Every one being in

consequence much refreshed, set actively to work in carrying the baggage and provisions to the top of the hill, which was three hundred yards from the landing-place, very abrupt in its ascent, and covered with thick and prickly underwood. The party also suffered much from the heat of the sun as the day advanced, and from the bites of musquitoes and of small black flies, which rose in clouds beneath their feet.

Through the example of Captain Maxwell, foremost in every toilsome effort, and the perseverance of his officers and men, every article on shore was removed to the top of the hill during the forenoon. This labour accomplished, the men were mustered in divisions, and addressed by their commander in a few words, pointing out the necessity of subordination, and reminding them, that although a sufficient quantity of provisions had been saved to last them many days, yet as the fate of Lord Amherst and his companions, on whose safety depended their early succour from Batavia, must be uncertain, it was necessary to keep on short allowance; and that, as they were in a situation in which they were liable to the attacks of pirates, their surest defence would be union and discipline. Different parties were then directed to separate duties. Whilst one was employed in tending the landing-place and unlading boats as they arrived from the wreck, another cleared the hill for a regular encampment, freeing its summit from the smaller trees and underwood.

On the morning of the 20th great exhilaration was excited by the discovery that the well would afford a quart of water for each man; but was speedily diminished by the intelligence that the first lieutenant and thirty men had been driven from the wreck by some Malay prows.

It appeared, that whilst all hands on board had been employed in removing stores unto a raft alongside, two Malay boats, full of men, were observed bearing down upon them. The party not being able to muster any other arms than a few handspikes, took to their boats, and making for the shore, were instantly chased by the Malays.

As they approached the island, and were struggling with a baffling current, eight more Malay boats came round a projecting rock, and gave them chase. The Malays were gaining rapidly upon them, when two of the Alceste's boats coming in sight from the landing-place, the pirates relinquished the pursuit and made for the wreck.

On receiving this information Captain Maxwell ordered the drum to beat to arms, and all the weapons which had been saved to be brought together. On examination they were found to consist of a few rusty muskets, some cutlasses, and the officers' swords. A small supply of powder had been procured from the ship, by drawing her guns, but of balls there was scarcely a round. Ingenuity quickly supplied this deficiency in the means of defence. A large number of young, tall, straight and tough trees, which grew around the encampment were immediately felled, and formed into pikes of eight feet in length, having their points hardened by fire; whilst all the pewter and tin vessels were melted into balls. Measures were then taken to guard against surprise. The crown of the hill was surrounded by a strong bulwark formed of the trunks and branches of trees; and picquets were stationed at the well and at the landing-place. The day, consumed on the island in the execution of these necessary measures, was spent by the Malays in plundering the wreck and landing their booty on a rock in its vicinity.

Having lighted fires, the party retired to rest under much anxiety; well knowing the ferocious disposition of the Malays, whose numbers might be readily increased to an overpowering amount.

During the night an alarm was excited through the whole encampment by the challenge of the sentry, who heard something approaching him through the neighbouring thicket. A search being immediately set on foot, the intruder was found to be a large monkey attacking some fowls at the foot of the hill. Other animals more disgusting and noxious than monkeys infested the ground of the encampment: several persons were bitten by scolopendras and scorpions.

Early the next morning two boats, well manned and armed, were

sent off to take possession of the ship, and to obtain if possible more arms and provisions. On approaching they saw two Malay prows leaving, and almost at the same instant observed smoke rising from several parts of her deck, and driving through the ports; and in the next, flames bursting from every quarter. Finding it hopeless to attempt getting on board, the boats returned to the island. The Malays left the wreck as soon as they had set it on fire, and were not again seen during the day.

The day having been spent on shore in strengthening the fence, the party retired within it at night with some confidence; but were again alarmed, and by the same cause, a large monkey. The sentry who guarded one of the approaches to the hill, confident that he saw a Malay, discharged his musket, and roused by its report the little garrison, who turned out under arms. Their confusion was much increased by a shout from the picquet at the landing-place, who, hearing the report of the musket, cheered with the purpose of awing the pirates. These alarms, although absurd when their causes were discovered, kept the party on the alert for the remainder of the night.

Early the next morning a party was again dispatched to the ship, still on fire, and found her copper on the larboard side alone above water, and so hot, that by throwing water upon it they scarcely cooled it sufficiently to permit their getting on board. Here every object declared the skill of the pirates in the business of destruction. The masts were totally consumed, and their iron rings had fallen to the bottom of the wreck. The upper and main decks were destroyed, and the lower deck was covered with charcoal, which yielded to the foot, and probably rested on a half-consumed base. Cases of wine and many other articles in the lower part of the ship had been preserved from the fire by the water which covered them, and had floated up in consequence of the destruction of the decks. After lading the boats with wine, flour, and some arms obtained by diving, the party returned to the shore.

During the absence of the boats, twelve sail of Malay prows

came round the south point of the island, and reconnoitred the landing-place, and had not quitted their situation at the close of day. The usual precautions being taken, the party retired early to rest, and passed the night without interruption.

The two following days, during which no prows appeared, were employed in forming another well, and in completing the fortification. The latter had now become a fortress of some security. It consisted of a strong fence six feet broad surrounding the brow of the hill, and was formed of large piles driven into the ground, intertwined with the leafy branches of great trees; and it communicated by two gates commanded by bastions and platforms, with the avenues leading to the wells and landing-place. Thus protected, the party felt themselves a match for a force much more numerous than their own.

Early on the morning of the 26th, two Malay boats having in tow two canoes laden with plunder, being observed off the landing-place, the barge was manned and armed under the command of Lieutenant Hay, and sent after them. They immediately cut away their canoes and made all sail, but were rapidly gained upon by the barge which soon came up with the sternmost. Mr. Hay then made signs for her to shorten sail and come to a parley; and these not being attended to, fired a musket to bring her to, but was instantly answered by a swivel which she mounted in her bows. The barge now endeavouring to run alongside, one of the Malays at each attempt pushed her off with a long pole, whilst his comrades attacked her crew with their spears and swivel. They threw their spears with great deliberation, poising them above their heads and taking a steady aim. A strong side-wind fortunately blowing at the time, drove them in a slanting direction, broke their force, and rendered them untrue to their mark. No person in the barge having a serviceable musket, excepting her commander, he marked the man who managed the swivel, and brought him down by his first shot; and by his next the most active spearman. The sailors not being sufficiently near the pirates to use their cutlasses or boarding-pikes, could only throw

back the spears which fell amongst them. To prevent their escape, they threw the barge's grapnell into the prow, which, to their astonishment, instantly sunk; the grapnell having probably passed through her bottom. Six of her men (of whom there had been ten originally) immediately appeared in the water swimming with great dexterity. Although three of them were severely wounded, they all continued to fight, refusing quarter, and endeavouring to wound the barge's crew with their long spears. At length the three wounded men, being much exhausted, were dragged on board; one of them died in a few minutes, another within an hour, the third survived. Of the others, one swam towards the Alceste's gig which was making after the barge, and was taken on board, the remaining two disdaining captivity dived and were seen no more. During the action the other Malay boat although at no great distance from her consort, did not attempt to interfere, but setting every sail made her escape. The barge having returned to the island, the wounded man was immediately dressed and kindly treated. The dead Malay was buried; he had been a very powerful man, and even in death excited admiration by his muscular form and stern countenance. The prisoner was put under the guard of a marine at some distance from the fortification, that in case of his escape he might not be able to carry intelligence of its strength and the numbers of the party to his companions. The sequel proved the propriety of the measure. Having been a few days afterwards employed by his guard to cut wood, he escaped to his companions. None of the barge's crew had been seriously wounded.

Soon after the return of the barge the midshipman at the look-out rock reported that fourteen sail of Malay boats were standing down towards the island from Banca. They soon after anchored between Pulo Leat and a small island, in the very situation which Captain Maxwell had pointed out to Lord Amherst for the anchorage of the prows which, as had been determined upon between them, should be sent for the relief of the party from Batavia. The

hopes of all raised by this circumstance, were further excited by several men leaving their boats and wading towards the shore, the foremost of the party bearing in his hand a small flag. Mr. Sykes, an officer of the Alceste, accompanied by two others, having in his hand the English colours, walked out to meet them; and as he advanced laid down his arms and held up his hands, to show that he was offenceless: on seeing this the Malays threw aside their spears. He then made signs that not more than three of them should come forward, which being complied with, the two parties soon met. The Malays immediately payed Mr. Sykes every mark of humility and respect, and were led by him to the Captain, who anxiously waited their arrival at the landing-place. Through the medium of a sailor who spoke a little Malayse, he learnt that they were not from Batavia, and that they had come to Pulo Leat, to gather sea-slugs and sea-weed. Their spokesman, whom they called their rajah, was extremely solicitous that the Captain should visit him on board his prow. This proposition was urgently opposed by Captain Maxwell's officers and men, who felt but too well that their own safety depended upon his. Having continued on the wreck whilst his presence could animate or direct the exertions of his men, he left it but to assume a more painful situation on shore. Amidst a variety of dangers constantly pressing him, from the time that the Embassy left Pulo Leat to his removal from it, he cheered, restrained, armed, and protected his men by his counsel and example, and so convinced them of the value of his existence, that they watched him as the guardian star which alone could lead them to safety. Several officers accepted the invitation, and accompanied by a force sufficient for their security against any perfidious attempt, visited the prow; and having met with hospitable treatment, returned in the evening with a present of fish and Indian corn for the Captain.

Early the next morning these amicably disposed Malays were seen actively plundering the wreck, in which friendly office they were

soon after joined by several of the pirates with whom they had disclaimed all connection.

The pirates probably came from all the different islands in the neighbourhood, as they bore down upon the wreck in every direction. During high water their detachments occasionally anchored as close as possible to the landing-place, with the apparent intention of reconnoitring, and of intercepting any boat that might attempt to leave it. With the first purpose also they communicated with the party under different pretences, and once received a letter which they engaged to send immediately to Minto, an European settlement on Banca. When the tide ebbed they got under sail from the apprehension of grounding, and re-visited the wreck, but re-appeared off the landing-place at the next flood-tide.

The danger of the shipwrecked band became hourly more pressing; their enemies increased in number, and the period allowed for the arrival of intelligence from Batavia had elapsed. The sea could be distinctly seen for several miles from a tall tree on the most commanding part of the hill. How anxiously did one or other watch from its extreme height the approach of any vessel! In vain did his companions enquire what he saw; "Nothing," was the usual anwer; or if for a moment he beheld an uncertain point in the distance, it either expanded into cloud or vanished into air.

It being now the 1st of March, Captain Maxwell looking to the possibility of some fatal accident having befallen the Ambassador and his companions, contemplated an escape with his officers and men in the boats which remained. He therefore ordered them to be properly examined, their oars and sails to be repaired, and every thing to be got ready for cutting through the pirates and making a voyage to Batavia.

The boats not being thought sufficiently secure at the old landing-place against any unexpected attack of the Malays, were removed to one more to the southward, where a sandy beach was

covered and commanded by a precipitous rock. The party could only reach the summit of this by crossing from a lower rock by the trunk of a tree, which they used as a draw-bridge, and could throw down at a moment's warning. It was constantly occupied by a picquet, and from its inaccessibility was called the Gibraltar rock. It communicated with the hill by an irregular avenue cut through the wood.

Very early in the morning of the second of March twenty-nine prows anchored between the two landing-places, and immediately began to load their swivels and to ereet platforms on their decks. No doubt being entertained that they meditated an immediate attack, every preparation was made to receive them. The party was mustered under arms, and double guards were placed at the landing-places.

In the evening the same rajah, who had before visited the Captain, came on shore. He still insisted on his friendly views, but accused a part of his companions, to whose prows he pointed, with the intention of attacking the party that night, rendering at the same time his own professions suspicious, by requesting that two of his people might sleep on the hill; a request that was of course refused. His probable object in making it was to ascertain the exact force of the party, of which the Malays had been kept in ignorance, and no doubt believed to be greater than it was. To produce this impression, whenever a conference with the pirates took place, Captain Maxwell so disposed his men, that whilst the usual picquets were visible to the prows, their ambassadors saw people moving about them in every direction, some peeping from behind rocks, and others appearing in different parts of the wood, whilst a body of officers surrounded themselves.

Having dismissed the rajah, Captain Maxwell mustered his force, and ascertained accurately the extent of his means of defence. The party, including servants, consisted of one hundred and ninety men, of whom forty-two were armed with muskets, forty with boarding-pikes,

and twenty with cutlasses; the others with poles, having sharpened pieces of iron or knives fastened to their ends, or having points hardened by fire.

The Malays allowing fifteen men to each prow, which was a moderate calculation, were between four and five hundred in number, armed with spears and crisses. Taking into consideration every circumstance, especially his advantage on the score of fire-arms, the defensible nature of the ground, and the strong position on the hill, Captain Maxwell felt no apprehension of the result of an immediate attack. On the other hand, he could not but reflect, that the number of his enemies would hourly increase, and that whatever loss they might suffer in action they could readily compensate; whilst his own, without relief from Batavia, would be irretrievable. The gloomy anticipations this last view of his situation must have excited he locked in his own breast; and having addressed his men, pointing out in a few words his confidence in their valour, his certainty of their success, the probability of their being attacked that night, and the measures he wished to be taken, dismissed them to their several posts. Those who were not on guard retired to sleep on their arms, and the pirates did not interrupt their repose.

By day-light the next morning the number of prows off the landing-place had increased to forty-five, and were soon after joined by ten more. All possible preparation was made to defeat their attack, but their endless supplies created a cruel anxiety, and the hopes of succour became feeble as its want became greater. Their proverbial treachery forbade any attempt at treating with them, and their force was sufficient, if well exerted, to prevent the arrival of boats coming to the relief of the party, whilst the rocky and shallow nature of the coast would not suffer the approach of a ship within several miles of the island. To conquer or to die was no new or fearful alternative to British sailors; but to die by the hands of savages in a remote corner of the world, whence their fate could never reach the knowledge of their friends, and in a conflict from which their

country could derive no good and themselves no glory, was indeed a bitter thought. In a pensive but determined mood they awaited the moment of attack, their desperate courage receiving a keener edge from the known sanguinary and unappeasable temper of their foes. The day was cloudy with a drizzling rain. Those who occupied the hill, and were not engaged in duty, separated into groups and took refuge in their huts, and discussed the various circumstances of their situation. Whilst anxiously weighing every chance of relief, and endeavouring to open new paths to hope, an officer on the look-out tree called out for a telescope. A feverish expectation agitated all who heard him, but all were silent. They had so often been deluded by a similar demand, that at first no one dared to ask what he expected to discover. At length Captain Maxwell having handed up his glass, ventured to enquire, "Do you see any thing, Sir?" "I think I see a sail," was the cautious answer.—"In what direction?" "To the southward."—"What kind of vessel is she?" "I cannot at present determine."—"How is she steering?" "Apparently N.N.E., but I am not certain." Nearly half an hour then elapsed in consequence of the haziness of the atmosphere before more satisfactory answers could be obtained, although "Well what is she?" was the repeated demand of the impatient expectants. At length the welcome affirmation "She is a square-rigged vessel, steering N.N.E.," soon followed by "She is preparing to anchor, but I am losing sight of her under the south point of the island," diffused a general and a cheering hope. In the next instant it was reported from the landing-place, that the whole Malay force, having seen the vessel, were getting under weigh and endeavouring to effect their retreat. Every one immediately hastened to the shore, and beheld the pirates crowding all sail and standing from the island. In their haste to be off, two of their prows grounded, but got clear before they could be reached by a party of the Alceste's officers and men who, armed with pikes, rushed into the water and swam after them.

A party now went round to the south point of the island, and having obtained a view of the ship, returned with the intelligence that she was at anchor about twelve miles from the island, and had hoisted English colours. As it was possible that she might not have arrived for the purpose of relieving the party on the island, it was necessary, if possible, to communicate with her immediately, to prevent the chance of her getting under weigh during the night. To do this was somewhat difficult, as it was nearly dark, and low water, and a boat might be intercepted by some lurking prows; yet notwithstanding these obstacles, the attempt was made, and happily succeeded. The gig was carried for nearly a mile over the shallows on the shoulders of her crew into deep water, and under the command of Mr. Sykes and Mr. Abbot, dispatched for that purpose. These gentlemen having got round a small island off the west point of Pulo Leat before dark, obtained sight of the vessel, and having taken her bearings, made the most of a favourable breeze, and reached her about nine o'clock. On mounting her deck, they encountered in Mr. Ellis a sufficient explanation of the occasion of her arrival. She proved to be the Ternate, who had parted company with the Princess Charlotte soon after leaving Batavia Roads.

Captain Maxwell having seen the gig fairly off, assembled his men, and having expressed to them his entire approbation of their conduct up to that moment, declared his intention to permit no relaxation of discipline as a consequence of the arrival of the ship and of the disappearance of the pirates. The former, he observed, might have arrived without the intention or the means of succour, and the latter might return in a few hours with redoubled force.

It was ten o'clock the next morning before the gig returned to the island. She had left the Ternate at four A.M., but had been prevented by the force of a contrary wind and current from arriving earlier, not being able to contend against them. The Ternate's cutter, which had left the ship at the same time, was compelled to return. In the afternoon, one of the Aiceste's boats was sent off to the Ternate for a carronade and a supply

of ammunition, and returned with them early the next morning. The carronade being immediately mounted in the launch and loaded with cannister shot, its range and effect were tried and found so satisfactory, that the return of the Malays was heartily desired: they did not revisit the island till after the departure of the Ternate. Two boats were sent off to the ship during the day with some sick and lame men and a quantity of provisions and baggage, and a large raft was formed to assist in the conveyance of the persons and things that remained.

On the 6th, all but the Captain and eighty men had left the island and were safe on board the Ternate, with the greater part of the removable packages. Early on the following morning, Captain Maxwell and the last of the party, after burning the fence and every article that could not be carried off, took their farewell of Pulo Leat. By ten o'clock, all the party being safely on board the Ternate, she got under weigh for Batavia Roads, and anchored in them on the afternoon of the 10th of March.

The Princess Charlotte did not arrive off the island till several days after the Ternate had left it, and was then obliged by adverse currents to anchor twenty miles from the shore. One of her boats, having on board Mr. Mayne and Mr. Marrige, immediately attempted to reach it; and on approaching the old landing-place, found a fleet of Malay prows at anchor. She immediately put about, but not before she was seen by the pirates, and chased by two heavy prows full of men. The pirates gained rapidly upon her, and but for one of those providential circumstances which had more than once saved the shipwrecked band, would have overtaken and overwhelmed her feeble crew. The winds had been so light, that the boat had been obliged to depend chiefly on her oars for making any way, whilst the large spread of canvass used by the prows, enabled them, even in a very light breeze, to go fast through the water. At the moment that escape seemed most doubtful, a heavy squall filled the sails of the boat, and frightened the Malays back to the island.

CHAPTER X.

In my first visit to Java, my opportunities of seeing the island were confined to a few excursions into the interior; but they enabled me to estimate the amiableness of the natives, to enjoy the delightful scenery, and to examine some of the singular productions of their much-favoured land. In my second unforeseen, but more lengthened visit, when deprived of all means of scientific research, and all the objects for which I had undertaken the voyage, I readily yielded to the dissipation by which the equal kindness of our countrymen and Baron Van der Capellan hoped to seduce us into a forgetfulness of our misfortunes. The seven weeks that we remained on the island were almost entirely spent in the immediate vicinity of Batavia; and although they afforded us ample opportunities of observing the manners of the colonists, gave us few facilities for holding any intercourse with the natives. In looking over my journal, I find one day's occupation so very similar to another, that in taking my reader through a day's routine of engagement, I shall do my best to give him a notion of the local circumstances that meet the eye of a temporary dweller in the purlieus of Batavia.

Batavia is built in a low, swampy soil, close to the sea; its streets running nearly north and south, at right angles with the beach. These streets are very broad, and many of them terminate in fine roads leading into the heart of the island. On the principal of these, about three miles from the town, at a place called Weltervreden, was situated the cantonment of our troops; and here were the quarters of the Embassy, whilst they remained in Java.

The house which they occupied was the ordinary residence of Mr. Fendall, confined at the time by illness to his country seat. It was situated on the western side of a large plain, opposite to an immense massy unfinished stone building, begun by General Dandals, and intended as a residence for the Dutch governor. A few hundred yards to the left, on the opposite side of the road, and on the northern side of the plain, was the house of the Commander-in-chief of the British forces, before which the English flag was still hoisted. On the right and on the southern side of the plain were stone barracks, occupied on our arrival by part of a British regiment still remaining on the island, but which gave place to the shipwrecked crew of the Alceste. The road passing in front of our quarters led to the intrenched camp of Cornelis, and beyond to Buitenzorg, the country-seat of the Dutch Governor. By crossing the road and the plain, we reached a bazaar, or market, and through it a second road parallel to the other, also terminating in one of the streets of Batavia. The bazaar was composed of two lines of shops extending about four hundred yards, and occupied by natives and Chinese. The former were chiefly venders of fruits and vegetables; the latter of manufactured articles, both domestic and foreign.

Visiting Batavia by the way of the bazaar was my frequent exercise early in the morning, when the fresh land-breezes gave rather the coolness of a temperate than the heat of a torrid zone. I usually reached it when the natives were bringing their vegetables to the market, and witnessed that abundance and variety of delicious fruit which form such a peculiar and attractive character of many countries bordering on the equator, but more especially of Java: the stranger, in purchasing fruits in this island, finds no coin too insignificant to obtain them in abundance. Their kinds were too numerous and too novel to admit their recognition then, and still less their enumeration now; but I may notice a few of the principal.

First in beauty and flavour was the celebrated *Mangostan*. This fruit, which has been so often eulogized by different travellers, cer-

tainly merits much of the praise that has been lavished upon it. It is of a spherical form, of the size of a small orange; is when young, of a reddish green colour; when ripe, of a reddish brown; and when old, of a chesnut brown colour. Its succulent rind is nearly the fourth of an inch in thickness, contains a very powerful astringent juice, and in wet weather exudes a yellow gum, which is a variety of gamboge.* On removing the rind, its esculent substance appears in the form of a juicy pulp, having the whiteness and solubility of snow, and a refreshing, delicate, delicious flavour. To define it by more precise language is very difficult. We were all anxious to carry away with us some precise expression of its qualities, but after satisfying ourselves that it partook of the compound taste of the pine-apple and the peach, we were obliged to confess that it had many other equally good, but utterly inexpressible, flavours. This fruit, from its perfect wholesomeness, may be eaten in any quantity; and as it possesses no luscious qualities, it does not soon cloy the palate. The mangostan tree is worthy of the fruit it bears. It grows to the size of a very large cherry-tree. Its leaves are three or four inches long, of an oval form, of a shining green colour, and might be taken for those of a magnolia. Its blossom is a spreading corrolla of four petals, of a reddish pink colour, and often decorates the plant at the same time with its fruit. Its branches are pendant, and, when loaded with fruit, curve in graceful arches quite round the stem. As much of the habit of this plant as can be expressed by a branch, is beautifully given in the Atlas to Mr. Marsden's History of Sumatra.

The bazaar afforded in equal profusion with the mangostan, the custard apple, rambootan, poolosan, and dorian. The custard apple well deserves its name, for its loose pulp enveloping black seeds more resembles in flavour a mixture of apple tart and custard, than

* The gamboge of commerce is derived from a plant, *Garcinia Cambogia*, of the same genus as the Mangostan, *Garcinia Mangostana*.

any thing else to which it can be compared. The rambootan, which is well figured in Mr. Barow's work on Cochin-China, is a red fruit about the size of a plover's egg, and is covered with long hair-like processes, whence its name, rambootan or hairy fruit. On removing a thin rind, lined with a substance much resembling white French kid, the pulp appears in the form of the plover's egg, boiled and deprived of its shell. Its flavour is very agreeable, and apart from the mangostan would be considered excellent. The poloosan, in the form and flavour of its pulp, resembles the rambootan, but is thought the better fruit; it differs from the rambootan in wanting the hairy processes. The dorian, to taste which the first time requires some resolution, is a large fruit of a roundish oval form, and in size and in the colour of its elevations on its surface, is not unlike the pine-apple, but is the produce of a large tree. The esculent part of the fruit enclosed in a thick rind, consists of a yellowish white pulp enveloping several large seeds. Its smell to a stranger is quite intolerable, and arises from sulphuretted hydrogen, which stains silver spoons used in eating it. Although its flavour is at first scarcely more agreeable, it is voraciously devoured by the natives, and is soon highly relished by Europeans, who lose the consciousness of its odour.

Pine apples, cocoa nuts, and the bread fruit, are too well known to require any description; and with respect to their abundance I have only to remark, it would be difficult to name either fruit or vegetable that is so common in England as they are in Java.

Beyond the bazaar, I entered on the road, lined on both sides with tall trees, chiefly the *Canarium commune*, growing on the banks of canals, always filled at an early hour with natives of both sexes. The women had on a kind of petticoat, which reached above the breasts; the men were entirely naked. The dwellings of these people, formed of bamboo and the leaves of palm, and sheltered from the sun by the various shade of palms, mangostans, and bananas, stretched in long lines on the banks of the canal. In a plantation of cocoa nuts and sugar trees I drank of a liquor called

toddy, obtained from the latter. The sugar tree is a tall palm, bearing a round fruit, which grows in large bunches from a common footstalk. To obtain the toddy the natives wound the stalk beyond the bunch, and place a vessel beneath it; and having allowed it to remain all night, find it in the morning full of sap. When drunk before sun-rise this fluid is a refreshing brisk beverage containing much carbonic acid, is much relished by the natives, and was to my taste very agreeable. As the day advances and the heat increases, it runs rapidly into the vinous fermentation, and afterwards passes into vinegar.

The sugar tree, called *airang* by the natives, is one of the most valuable plants that nature has given to the Javanese. The same juice that gives them the toddy affords, by some simple process, a brown sugar: the finer fibres of the bark are made into excellent ropes, and the coarser ones are made into pens. I may here mention that the ink used by the Javanese is beautifully soft and black, and probably equals in most respects that of the Chinese. At my request a Javanese manufactured it in my presence. He used two ingredients, one a gum resin, which he called *damuh*, and came, he said, from Sumatra; the other a gum in all respects like gum arabic, called *cowistah*. Having filled a joint of bamboo to the very brim with the *damuh* reduced to powder, he fixed it in the ground, and then set the resin on fire, and collected its smoke in a plate which he suspended over it. When he had thus obtained a sufficient quantity of its soot he mixed it in a mortar with the *cowistah* dissolved in water, and triturated them together till by an evaporation they obtained the consistence of paste, then placed them in the sun to dry, and thus completed the process.

I always found in the vicinity of the huts, amongst a variety of other beautiful plants, the *Champaca* of the natives and of Linnæus, the *Michelia suaveolens* of other authors. Its flowers are used by the Javanese to perfume and ornament their dress, and to decorate the dead bodies of their relatives, and are sold in large quantities in all the bazaars. The *Hibiscus rosa Chinensis* and the *Poinciana pulcher-*

rima were amongst their favourite ornamental plants. The *Murraya exotica* and *Justicia picta* adorned their hedges, and the *Gloriosa superba* in full blossom flourished in every moist and shady place; and the *Sida rhombifolia* and *Phlomis zeylanica* were universal on waste ground.

Beyond the huts of the natives the road winds through the Chinese burial-ground, and changes all its former beauties for the loathsomeness of a bog covered with tombs. The Chinese burial-ground excites the notion of a great battle having been fought, and the slain having been hastily and promiscuously buried. So crammed is the whole space with its lifeless inhabitants, that the soil loosened by fresh burials, has often yielded their remains to the action of the rain and surrounding water which rises all around the graves. It is impossible to avoid shuddering at the consequences that must be induced by the quantity of noxious effluvia necessarily engendered by these circumstances in a country within six degrees of the line. The *Nelumbium* and the *Lotus*, in full bloom, flourished amidst the tombs, and formed a singular contrast to their gloomy situation.

Beyond the burial-ground the town is soon reached, and affords at an early hour, the singular spectacle of smiths, carpenters, and other artisans, chiefly Chinese, going to their day's employment in their own carriages; a kind of cabriolet, drawn by two Javanese ponies, which can be kept at a very reasonable rate. All but the very lowest class in Java disdaining or being afraid to walk exposed to the sun, a discriminative mark of rank in other countries is here in a good measure wanted. After passing through the town of Batavia I always felt a real or imaginary sickness and torpor.

Many of us, in conformity with the local belief that it is dangerous to be in the sun after eight o'clock in the morning till five in the afternoon, kept within the greater part of the day. A party, however, much to the astonishment of the inhabitants, frequently amused themselves at cricket in the plain before our quarters, during the heat of the day; and what perhaps was scarcely to be expected, took no harm from the exercise.

A drive before dinner, after five o'clock, into the town or the country is the general custom of the colonists, and was one of our pleasantest amusements. The number of carriages which crowded the road, and were filled with people of all ranks, ages, sexes, and colours, forms a highly animated picture. The most brilliant equipage was that of the first Dutch commissioner, drawn by eight beautiful grey ponies, driven in hand by his secretary.

Our evenings were sometimes spent at balls given by our countrymen or by the Dutch authorities, and gave us opportunities of seeing all the beauty and fashion of the colony. The old Dutch colonists, who associated but little with the English during the British government of the island, appear to have altered more in their dress than their habits since they were described by Mr. Barow. The gentlemen have laid aside their velvet suits, and the ladies for the most part have assumed the European costume; but both sexes are still addicted to heavy meals. About twelve the dancing usually ceased for a time, and a supper consisting of large joints of different kinds of meat and of fowls was served up, of which the Dutch part of the company seemed to partake very heartily. After supper the more moderate guests separated, but a great number resumed the dance and partook of a second supper about two or three in the morning; and some choice spirits kept it up till day-light, and regaled themselves a third time.

Many of the ladies were well dressed, and had personal charms, especially in the eyes of those who were returning from China. A few of them appeared in the costume of the country, which had much to recommend it, being well adapted to the climate. It consisted of an embroidered robe and petticoat, fitting neatly but not closely to the form. The robe hung down to the knee, and was confined round the waist by a belt fastened with a clasp glittering with diamonds. The gentlemen, both Dutch and English, wore European habits, to the lightness of which they paid little attention. Nothing is more strange than that Europeans in hot climates should

submit to the most oppressive sensations from a pertinacious adherence to national clothing.

A visit to Buitenzorg, the country residence of Baron Van der Capellan, gave us our only opportunity of seeing the beautiful scenery of the island. Buitenzorg is distant about thirty miles south of Batavia, is a thousand feet above the level of the sea, and is situated on the banks of a torrent at the foot of the Sallak Mountain. The Sallak of six summits rises to the height of six thousand feet, and is covered with verdure to its highest pinnacle. The dense and impervious vegetation clothing its steep declivities gradually unfolding towards the base disclose the huts of the natives, planted on gentle slopes, which are terraced into paddy fields, intersected with rivulets, and skirted with groves. Boundless luxuriance and softness are the leading features of Java scenery. Yet whilst the landscape is rarely broken by bare and rugged rocks, it possesses all the grandeur arising from lofty mountains, deep ravines, and rushing torrents, and possesses in an eminent degree that picturesque character which is peculiar to tropical countries, and results from the universal growth of the palm tribe. Very often also it derives a character of the highest sublimity from the tempests which visibly gather round the summits of the mountains. In looking upon the Sallak, I have often watched one of these grand natural spectacles which must be seen to be fully appreciated. The Sallak stretches away nearly north and south, losing its height at first abruptly, and then in gentle undulations. A large dense, but broken cloud, rising gradually from the southern limit, acquiring in its progress increasing magnitude, and sending before it a faint breeze, usually announced the approach of a storm. Soon becoming of the deepest black, it ascended to the summit of the mountain, and incorporated with a thunder cloud that already clothed it. Its volume thus increased assumed the form of a stupendous crescent, the upper horn enveloping the front, the lower, the base of the mountain; whilst the landscape behind, seen through its hollow, and still illumined by a brilliant sun, was distinctly visible.

The extreme parts of the cloud then gradually approached, and sending before them a rushing wind, closed the mountain from my sight. Its upper part now suddenly increased in blackness, flashes of lightning played within it, and it descended in heavy rain. Such are the appearances which are almost daily witnessed amongst the mountains of Java.

The temperature at Buitenzorg is never oppressive. At Cissarrhoa, fourteen miles further inland, and at a higher elevation, the thermometer, at ten o'clock on the morning of my visit there, stood at sixty-six degrees; and at Japannus and at other places of still greater elevation, it is generally so low, that the inhabitants use fires in the morning the greater part of the year. A Dutch gentleman who resides at Japannus, and to whom I had the pleasure of being introduced, carried in his ruddy complexion and active form the best signs of breathing a pure and temperate air. Yet this is the climate which has been looked upon with so much horror by Europeans, and as far as regards Batavia with justice. It is impossible to visit this city, and not to be astonished at the infinite pains that have been taken to unite in one spot all the possible causes of disease. It is built close to the sea on a wet alluvial soil, is surrounded by swamps, and intersected with nearly stagnant canals, the receptacles of all the decomposing animal and vegetable matter ejected from the houses and sewers on their banks. The carcasses of buffaloes and other animals brought down by the rivers, are stopped near the mouth of the harbour by the extreme shallowness of the bar; and undergoing putrefaction, contaminate the air around them. The houses are so built as to admit very little ventilation, being closely packed together, with their ends opposed to the sea and land breeze: indeed, so afraid is a Dutchman of having his perspiration stopped by cool air, that he closes all his doors and windows during its prevalence. These circumstances in almost any climate would generate disease, but must be dreadfully operative within six degrees of the equator: their effects are aided by the use of large meals, strong drink, and much sleep.

That the causes of disease are strictly confined to the town of Batavia, is proved by the circumstance of our troops having enjoyed excellent health at Weltervreden, only three miles beyond it. Here too the Embassy resided during seven weeks without experiencing any illness of consequence, although they generally entered the town two or three times a week. The diseases that fell under my care, whilst in Java, generally yielded to the simplest remedies, and never required the use of those powerful means which are thought necessary to combat the disorders of hot climates. Whether the indiscriminate use of mercury in almost every disease that calls for the aid of medicine in Java, has not led to much mischief, appears to me at least doubtful. As soon as symptoms of fever manifest themselves, no attempt seems to be made to analyse its cause; "it is the fever, and nothing can cure it but mercury." Mercury is accordingly given to an indefinite extent: if the patient live, "the mercury cured him;" if he die, "the disease killed him:" the remedy is never in fault. We were glad to leave, however, the vicinity of a place that had been the grave to many thousand Europeans, and embarked in high spirits on board the Cæsar, a ship taken up for our conveyance to England, on the morning of the 12th of April.

On leaving Java we carried on board with us two animals of interesting characters:—an immense snake, and an orang-outang. Of the one I have already given some account, and shall refer the description of the other to the concluding part of this work, as he is too important a personage to be hastily dismissed; and to say all that I wish about him in this place, would too long interrupt the order of the narrative.

We left the island with prosperous weather, and had continued on our voyage, accompanied by every favourable circumstance till the morning of the 5th of May, when being about two hundred miles to the south of the Mauritius, we were once more thrown into great peril by the ship's taking fire. About seven in the morning we were roused from our cots by violent shrieking, and the cries of fire. The whole ship was instantly in dreadful confusion; the smoke

pouring up in volumes from below, but coming from no determinate point. In this frightful predicament the self-possession of Captain Maxwell and his officers, and the promptness and courage of the Alceste's crew, saved us from destruction. Captain Maxwell, called from his cabin by the noise, instantly pointed out the duty of each person. Lines were formed from the ship's sides for handing buckets, and water was speedily at hand. "Where is the fire?" asked Captain Maxwell of the mate of the vessel. "In the spirit-room," was the whispered reply. "Mr. Holman*, ascertain the part of the deck which is over the fire, and let the carpenter be in readiness to scuttle it." Mr. Holman disappeared for a minute, returned, and placing his foot on the plank, exclaimed, "Here's the fire." In an instant the plank was cut away, and the fire seen raging beneath. Water was poured down in torrents, and in a few minutes the glad intelligence, "The fire is out!" was heard in the convincing tones of Captain Maxwell.

This danger past, we arrived safely in Simon's Bay at the Cape of Good Hope, on the evening of the 27th of May.

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* The gunner of the Alceste, not more remarkable for his coolness and courage in the midst of danger, than for his intelligent and manly conduct in all his relations as an officer. This tribute of praise springs less from the opinion of an individual unqualified to judge his merits as a seaman, than from the universal testimony of his shipmates who delight to tell of the merits of the gunner.

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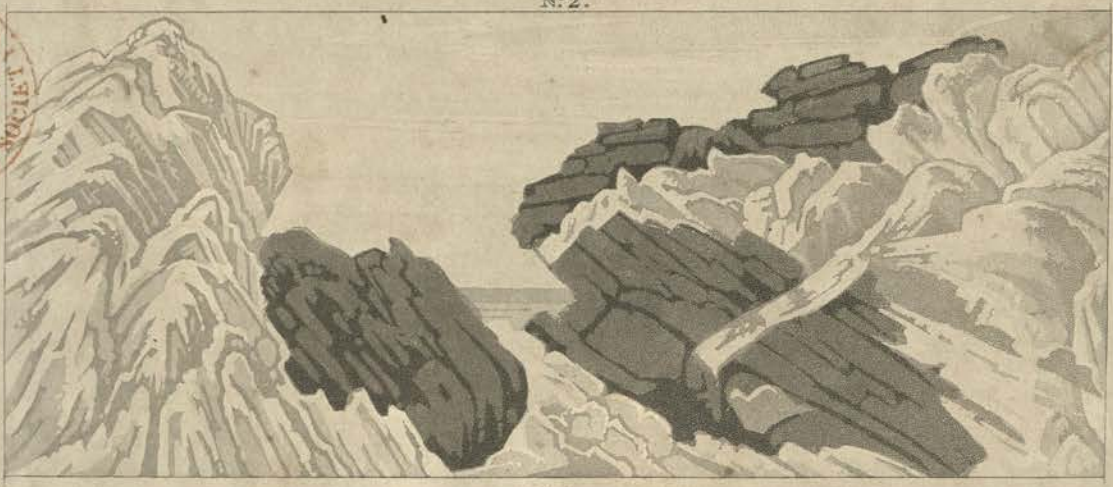

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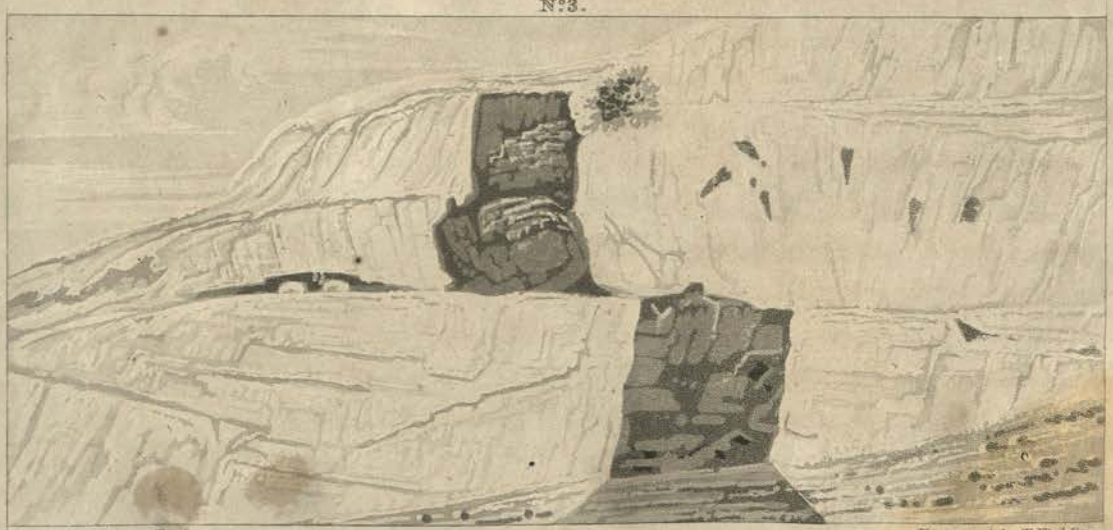

Drawn by H.Roper Esq.r

Engraved by T.Fielding.

GEOLOGICAL VIEWS AT THE CAPE OF GOOD HOPE.

Published by Longman, Hurst, Rees, Orme, & Brown, London, Oct.r 1817

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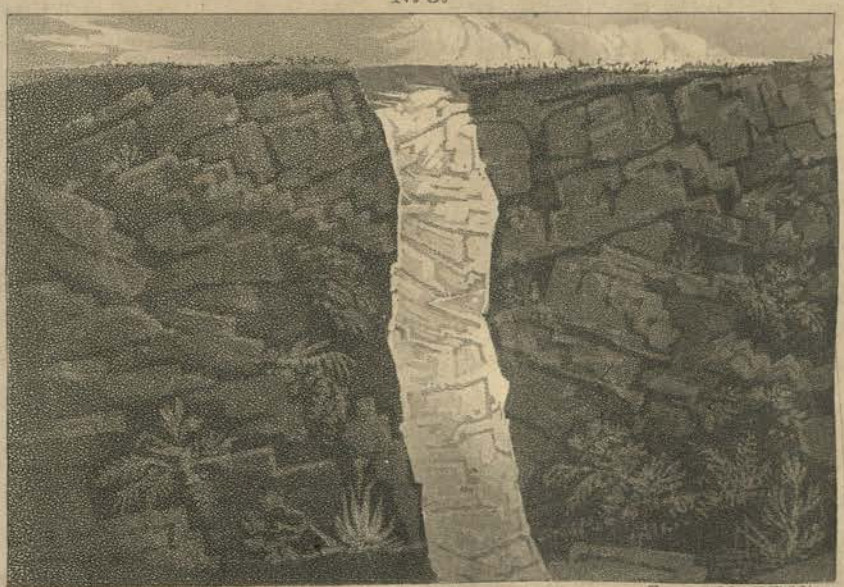

Drawn from a sketch by H.Raper Esqr. *Engraved by T.Fielding*

GEOLOGICAL VIEWS AT THE CAPE OF GOOD HOPE.

Published by Longman, Hurst, Rees, Orme, & Brown, London Octr 1.1811.

CHAPTER XI.

During our former stay at the Cape, I made many observations on the geological structure of its mountains, which, although important, I did not relate in the former part of this work, with the view of combining them with others made in our second visit. I will now endeavour to detail both nearly in the order in which they occurred; and in so doing shall take a general view of the geological appearances that are displayed by the mountains most accessible to a passing visitor at the Cape of Good Hope.

"The three hills which terminate the peninsula (at the Cape) on the north are, the Table Mountain, in the middle; the Lion's Head, sometimes called the Sugar Loaf, on the west side; and the Devil's Peak, on the east. The Lion's Head, which is about 2100 feet high, is separated from the Table Mountain by a valley that descends to the depth of fifteen hundred or two thousand feet below the summit of the Table Mountain, which is itself 3582 feet above the level of the sea. On the west of the Lion's Head, the ground, after falling, rises again, forming an inconsiderable elevation, known by the name of the Lion's Rump, from which the ground descends gradually to the sea. The amphitheatre formed by these three mountains, is about five or six miles in diameter, in the centre of which is placed Cape Town."*

The walk which best exhibits many of the different facts visible in these mountains, and which I am about to describe, lies through a large chasm, called a Kloof, between Table Mountain and Lion's Head.

* Transactions of the Royal Society of Edinburgh, vol. vii. p. 271.

In pursuing this, I left Cape Town behind me, and having the Lion's Rump on my right, and Table Mountain on my left, I advanced on a road which soon became rugged from the action of the innumerable streamlets, which, during the rainy season, cut it up in every direction. On first leaving the town, my way was over sand-stone, appearing to be rather the debris of that which covers the tops of the surrounding mountains than any regular formation, being composed of large fragments loosely held together by an ochreous cement, or entirely free; or, where a more regular appearance presented itself, the deep ravines by which I occasionally passed, brought no strata to view. Advancing onwards, I found the way covered with a loose soil of various hues, composed partly of sand, containing rounded fragments of quartz, and partly of a reddish clay, which seemed to be the product of decomposed felspar. When about a mile from the town, and at about two-thirds of the ascent up the ridge which separates Table Mountain from the Lion's Head, I encountered a scene which arrests the steps of every admirer of nature, and has irresistible claims to the deliberate examination of the geologist. The former delights in the fine contrast afforded by the verdant slope of the Lion's Hill, and the silvery foliage of its dazzling *Proteas*, when compared with the cavernous sides, shelving rocks, and gloomy shades of the Table Mountain. The latter dwells with curious eye and deep speculation on the evidences of stupendous power and endless time every where surrounding him; and equally exhibited by the unfathomable chasms worn in the solid rock and by the hill-like masses of the mountains, which, separated from their parent seat, threaten to sink with ruinous effect from their elevated site. On recovering from the first impression, his eye is attracted by the heavy grandeur of the Table Mountain; and having slowly traversed the wide and sloping surfaces of granite which deck its sides, pauses on the horizontal strata which compose its summit. Whilst occupied in observing their exact adjustment and even seams, he traces their direction towards his right, till he finds them abruptly broken at that part where the great

chasm forming the kloof commences. Their appearance here so much resembles an immense wall, a part of which has been suddenly thrown down, that his eye necessarily wanders in search of its opposite part; and it does not wander in vain. The Lion's Head, similar in structure and appearance, instantly presents itself, and forces the belief that at some period it has been continuous with the Table Mountain, and that at another they have been violently and at once disjoined.

Passing onwards, I soon reached the summit of the ridge separating the Lion's Head from Table Mountain, and forming the highest part of the road through the kloof, and obtained a magnificent view of the sea. From this point the road turns suddenly round the Lion's Head, and runs parallel to the Lion's Rump owards the town. In this course it is for some way bounded on one side by the granite which forms the base of the Lion's Head, and on the other looks towards the sea, to which there is a rapid declivity of some hundred feet.

Soon after commencing the descent from the ridge, I encountered a singular appearance in the wall of granite which limits the road on the right hand. It was a large vein or dyke passing through the very heart of the rock. Both the granite and the vein were much decomposed, and it was difficult at first to determine the nature of the latter. I afterwards found it to consist of rounded masses of basaltic rock imbedded in a soft yielding matter, resembling decomposed granite. It has suffered the shift represented by No. III. of the Geological Views at the Cape of Good Hope. Near the spot where this occurred, an immense cleft in the mountain exhibited a stratum of sandstone resting on a shelving surface of granite, in an unconformable position and in so even a manner as evidently to have been undisturbed since its formation. Both rocks were so decomposed as not to afford good specimens, but appeared to have no intervening bed between them, and to be distinctly separate.

As I pursued my road, other and equally interesting appearances

presented themselves on the slope of the Lion's Head, over which large masses of granite are piled one upon another, are grouped side by side, or are scattered about in no definite manner. Some are evidently unconnected with the rock beneath, but many appear to be continuous with it. These rocks frequently exhibit large caverns, formed either by the action of water on their surfaces, or by their separation into different portions. Like the granite forming the base of the Lion's Head, they are frequently traversed by large veins of quartz. Beyond these, and near the margin of the sea, I observed immense ridges of rock apparently of different colours, mingled together. I hastened to visit them, in the hope of meeting with an example of those *instantiæ crucis* on which different geological theories are supposed to turn. In the descent leading to them I traced a vein of small-grained red granite for upwards of thirty feet running through the very large-grained granite which enters into the composition of the neighbouring mountains. Passing over this, I walked upon large-grained granite till I reached the sea. Then turning on my right, and proceeding in a line with the Lion's Rump towards Cape Town, I found masses of black rock buried in fields of granite. Still advancing, I gained a spot in which there was an extraordinary junction of granite and black rock, mixing together in such equal proportions that it was impossible to say which predominated. A little beyond, the black rock lay up in ridges from the sea into the granite; and at length the granite disappearing, nothing but black rock was traced lining the coast for a considerable distance. The range of coast where these facts are visible, is known under the name of Green Point.

In re-examining these appearances with greater closeness, I found the black rock, which I shall call schistus, uniformly in vertical strata. On a diligent examination, a large vein appeared passing through it, which, whether examined in its entire state or in hand specimens, seemed to be made up of curved layers, and much resembled fine-grained gneiss. This vein was very near a junction of the schistus with the granite, which is encountered when the Lion's Head bears about south by east. The granite was here

of a very small grain, and of a red colour, and full of vertical seams filled with quartz, giving it the appearance of vertical stratification. Immediately beyond, the schistus was so mixed up with the granite, that it was difficult to determine whether the granite entered the schistus or the schistus the granite; large veins of the former appearing occasionally to enter the latter, and the contrary. Passing on, I reached a spot in which the small-grained granite spread in an extensive but thin sheet over the schistus; and I should certainly have considered it as a rock of an indefinite thickness if a large portion of it had not been broken away, and discovered the schistus beneath it. This appearance is well represented in No. I. of the Geological Views at the Cape of Good Hope.

The small-grained granite, from this interruption of its surface, extended several yards, when I again came upon schistus studded all over with large crystals of felspar. This porphyritic rock formed an intervening body several feet in extent between the small-grained granite and the commencement of another rock formed by an intimate mixture of the large-grained granite with the schistus. The wood cut very accurately represents a mass of this compound rock, which was also several feet in extent.

Beyond it I still found the schistus mingling with the granite in a large proportion, but not in the same confused manner. It rose up from the sea and passed into the granite in large beds. These were occasionally curved, and were most numerous near the sea, and became narrower as I receded from it, and at length terminated abruptly in the granite. Their appearance is faithfully shown in the second number of the Geological Views of the Cape of Good Hope. These beds were in some places traversed by veins of large-grained, and in others, but less generally, by veins of the red small-grained granite.

In proportion as I advanced along the shore over the granite, the schistus diminished in quantity, its beds becoming less wide and less frequent, and taking the form of veins. At length it was only to be seen in small detached masses buried in fields of granite. Pure large-grained granite was afterwards alone visible.

Similar appearances to these having been seen by Captain Basil Hall in Table Mountain, and described by him in the seventh volume of the Edinburgh Philosophical Transactions, I took the earliest opportunity, in the company of many friends, of ascending it, following the path pursued by that gentlemen.

Besides the examination of the mixture of schistus and granite, I had two other objects in view; the one, to discover, if possible, the mass of native iron which has so often been stated to exist on the top of the mountain; the other to trace the junction of the granite with the sandstone which rests upon it.

The first part of my road up Table Mountain was very easy, being over a cart-way to a mill placed on a stream which flows down a ravine in the face of the mountain which is opposite to Table Bay. My way to this spot, about a mile and a quarter from the town, was over a dark red sandstone deeply impregnated with iron. Leaving the mill, I continued my ascent up the ravine by the side of a torrent, whose course was interrupted by large fragments of the different rocks which compose Table Mountain. The path soon became difficult and steep, but the increasing interest of the scene

prevented the sense of fatigue. At not more than one hundred yards from the mill, I first encountered any schistus which could be considered as forming a component part of the mountain. It was so much decomposed and so covered with the fragments of other rocks, that I could determine little else about it than that even, at its very commencement, it had an intermixture of granite. Passing onward, I found the bed of the torrent widening and less choked with fragments, and exposing here and there large surfaces of schistus through which granite was ramifying in every possible direction, and in the most irregular shapes.

In one place I observed a broad vein of equal dimensions throughout, traversing the whole exposed surface of schistus; in another, a vein of equal breadth sending out large lateral branches, sometimes straight, frequently very tortuous, and even twisted in their course. Sometimes a vein commenced of great breadth, but suddenly contracted in width, or dissipated in innumerable streamlets. Similar appearances were visible in the wall of the ravine, to the right hand of the spot where I now stood, my face being towards the mountain. In this wall I observed broad perpendicular veins of granite passing through schistus, in the manner represented by No. V. of the Geological Views of the Cape. Advancing higher up,

the proportion of the schistus to the granite increased, the latter penetrating the former in less quantity, and frequently only in narrow streaks. But the schistus occasionally changed its dark grey colour for a lighter hue, and in these places, when fractured, resembled gneiss. Still advancing, I reached the spot where the granite seemed to rest on the schistus; the line of separation being very distinct, but interrupted by zig-zag streams of granite which passed from the great body of granite into the schistus.

Below the line of junction, a singular appearance was pointed out to me by one of my companions. In a part of the schistus, of a lighter colour than its principal mass, appeared two distinct portions of their natural dark colour, at some distance from each other, but having their opposite edges exactly corresponding. I discovered a much more palpable phenomenon, of the same character, in a ravine to the left of that in which I observed what I have just described. Here a mass of schistus was divided by a vein of granite into two portions, the vein passing through it in such a manner as to represent the legs of a right angle, the apex of which was in the centre of the schistus. In this instance also the two portions of schistus exactly corresponded.

Looking up from a point rather below the principal line of junction of the large body of the granite with the schistus, to the wall of the ravine on my right, I observed large masses of schistus imbedded in granite, and permeated by veins of the surrounding rock, in the manner displayed by the fourth number of the Geological Views at the Cape of Good Hope. These appearances, as well as that before mentioned of the perpendicular veins of granite, are better seen at some distance from the opposite side of the ravine, as they are on too large a scale to be viewed nearly with advantage.

The veins of granite vary much in the size of their component crystals. The large veins frequently resemble in all respects the rock which gives them off; but the smaller veins are generally of a smaller grain. In some instances veins commencing with the characters of large-grained granite become of a less distinct character, having at their termination a very small proportion of mica. Those veins which are small-grained, and still more so those that are narrow and twisted, are much harder than the surrounding granite. Their surface rises above the level of the schistus, and is therefore less acted upon by the water which flows over both, whilst the body of granite appears to be more decomposable. They are also more refractory to the hammer than the principal body of granite.

Leaving the line where the schistus communicates with the granite, I continued my ascent over a great extent of the latter, presenting a broad even slope, over which the water flowed in a clear current. No schistus was now visible; nor did the fragments of any other rock for several yards rest on the granite. At length the ravine became more narrow; large masses of a very crystalline sandstone began to appear, and I hoped soon to trace the junction of its principal strata with the granite. But the channel of the torrent still contracted, the fragments of sandstone became more frequent, and at length so entirely hid the granite, that I could only conjecture respecting their point of union. During my progress from this spot to the summit of the mountain, I met with little that interested me at the time, or that is worth relating. From the termination

of the granite, sandstone of different colours, first reddish, and afterwards beautifully white, and in exact horizontal strata, continued to the top of the mountain. The most striking fact regarding this sandstone formation is, that it contains, even when most highly crystalline, rounded masses of quartz, from the size of a pea to that of a small pear.

On reaching the top of the mountain, I was much gratified by the strangeness of the scene that expanded around me. On my left spread a plain covered with small fragments of rocks and a great variety of hardy flowering plants. On my right its surface was more unequal; the sandstone having yielded in some parts more than in others to the action of the elements, had assumed the most grotesque forms, exhibiting the appearance of ruined buildings, amidst which were growing numbers of beautiful and interesting ferns. Having recovered from the fatigue of the ascent, I commenced a search for the mass of iron, in which I was seconded by several friends, but our endeavours were fruitless; and although repeated a few days afterwards, had no better success.

I may here observe, that there can be no doubt that a mass of iron has existed on Table Mountain; I have conversed with several persons at the Cape, who have either seen it themselves, or have heard others mention it who have. But it is there generally believed to be the fluke of an anchor, as mentioned by Mr. Barrow*, and was described to me as such by the late Mr. Gothorpe, master of the Alceste, who had examined it. An elderly gentleman, who resides at Simon's Town, stated to Captain Maxwell that he was one of a large party who many years ago carried it up, with what motive it is perhaps not easy to imagine. It does not, however, I apprehend, exist on the top of Table Mountain at this time. A mass of iron, answering its description in every respect, has lately been seen at some distance below, and is probably

* Travels in Southern Africa.

tumbled further down by every succeeding person who finds it. The only iron which I met with in any part of Table Mountain was in the form of red oxide, a vein of which I saw passing through the sandstone when about two-thirds up the mountain.

My disappointment in not finding the union of the sandstone and granite on Table Mountain was forgotten in the examination of a very extensive junction pointed out to me by Captain Wauchope in a mountain that faces the sea, in the neighbourhood of Simon's Bay. I shall describe it in this place for the sake of connecting those phenomena from which I shall attempt any conclusions respecting the formation of the Cape mountains. The sandstone forming the upper part of the mountain is of a reddish colour, very crystalline in its structure, and approaching in some specimens to quartz rock. Immediately beneath the sandstone is a bed of compact dark red-argillaceous sandstone, passing in many places into slate of the same colour. This bed rests upon another of very coarse loosely combined sandstone, resembling gravel. Under this is another layer of dark red sandstone, terminating in a conglomerate, consisting of decomposed crystals of felspar, and of rounded and angular fragments of quartz from the size of a millet-seed to that of a plover's egg, imbedded in a red sandstone base. Beneath the conglomerate commences a bed, which I at first mistook for granite, and which is composed of the constituents of granite in a decomposed state, intermixed with green steatite, and a sufficient quantity of the dark red sandstone to give it a reddish hue. The felspar of this bed is decomposed, and exactly resembles that in the conglomerate above it. The mica seems in a good measure to have passed into steatite. The quartz is in small crystals, frequently having their angles rounded. This bed is several feet in thickness, and gradually terminates in granite, but the precise line of junction I was unable to trace. The appearances then were in the following order:

1. Horizontally stratified sandstone.

2. A bed of compact dark red sandstone passing into slate.
3. A bed of coarser sandstone, resembling gravel.
4. A second layer of compact dark red sandstone passing,

5thly, into a conglomerate, consisting of decomposed crystals of felspar and fragments of quartz in a sandstone base.

6. A bed composed of the decomposed constituents of granite and red sandstone, passing,

7thly, into granite.

But although the above is the general, it is not the universal order of the appearances presented by the mountain. It sometimes happens that one, sometimes two, and even more of the series are wanting. In one place I found the horizontally stratified sandstone resting on the coarser gravelly sandstone; in another on the conglomerate; and in another on the bed below it. In fact, in different places it came in contact with each of the series.

The beds of sandstone which pass into slate are altogether different, both in colour and structure, from the sandstone forming the top of the mountain: they are of a dark red colour, and very earthy in their fracture; the other is of a reddish gray colour, and crystalline in its fracture. Fragments of dark red slate containing minute plates of mica, are imbedded in the coarse gravelly sandstone.

The bed of coarse gravelly sandstone in some places exactly resembles what has been called the old red sandstone conglomerate: in it are found large and round fragments of quartz surrounded by crystals of shorl.

I have now described, with all the accuracy of which I am capable, the more general and important geological appearances which presented themselves to my observation during my two visits to the Cape of Good Hope. I have described them without attempting to deduce conclusions from them whilst occupied in detailing them, that I might give my reader an opportunity of forming his own opinions respecting them unembarrassed by any theoretical observ-

ations. I shall now, however, venture to state the explanation which occurred to me of some of the principal phenomena; in doing which I shall be found to coincide in inferences already drawn from the same class of facts. I may previously remark, that the same structure which is found to belong to the mountains accessible from their immediate vicinity to Cape Town, in all probability characterizes those of the great ranges of Southern Africa. In an excursion to a ridge of mountains, called the Jungerhook, about forty miles north of Cape Town, I found the same general constituents of sandstone, granite, and schistus, entering into their composition, wherever I could examine them closely; and I saw no mountain whose summit was not formed of horizontally stratified sandstone, and whose base was not covered with fragments of schistus and granite. The observations of Barrow and other travellers also show, that the general structure of the mountains in the interior of Southern Africa is the same as that of those in the neighbourhood of Cape Town.

My description of the appearances in Table Mountain will be found to agree in most respects with that of Captain Basil Hall, published and reasoned upon by Mr. Playfair in the seventh volume of the Edinburgh Philosophical Transactions. The black rock which I have called schistus, is there indifferently denominated killas and grawacky. Without attempting to give it a definite appellation, I shall describe such of its characters as I have been able to determine. The Devil's Hill, which is distinctly stratified, affords, perhaps, the best specimens for ascertaining its nature; as this mountain is intermediate between a coarse-grained rock on the one hand, and slate on the other. The colour of the rock is a smoke gray, with a reddish tint, which becomes deeper in proportion as the rock is exposed to the weather. To the naked eye the rock has a very fine granular appearance, with a glimmering lustre arising from minute scales of mica. Under a lens a sandstone structure becomes more distinct, and when the rock has been subjected to the heat of a common stove, the quartz sand becomes predominant and the conglomerate character unquestionable: this effect is probably

the consequence of the contraction of a clay base. The schistus with these characters has two extremes, one near its junction with the granite, the other when most remote from it. Near the granite it is distinctly granular to the naked eye; when most remote it passes into slate. The slate which is to be seen in quarries in Lion's Hill is intersected by narrow veins of quartz, and might be taken at first sight for primitive clay slate, but is of a dark gray colour, and contains scales of mica which, under a strong magnifier, give it the appearance of mica slate: it is, however, thus viewed, distinctly granular, and more so after exposure to heat. These are the leading characters and gradations of the schistus of the Cape; I call it schistus, because it is always distinctly stratified and has more or less of a slaty fracture.

The theory of the igneous origin of granite adopted by Captain Hall and Mr. Playfair to explain the phenomena visible in Table Mountain, very happily meets the facts, and must appear, I apprehend, to one standing on the spot where they occur, as incontestible.* They are indeed of that nature which strikes the conviction at the first glance. Carry to the spot one who never heard of geological theories, and ask him what he infers from the appearances before him, and he will exclaim, "The white rock has broken the black in pieces." Whatever may be the true explanation of the appearances, this I apprehend must be the first impression that affects the mind of any person visiting Table Mountain. A

* "The penetration of the killas, or grawacky, by veins from the mass of granite which it surrounds, proves that the killas, though the superior rock, is of older formation than the granite. The granite, therefore, is a mineral that has come up from below into the situation it now occupies, and is not one of which the materials have been deposited by the sea in any shape, either mechanical or chemical. It is a species therefore of subterraneous lava, and the progeny of that active and powerful element which we know, from the history both of the present and the past, has always existed in the bowels of the earth." Account of the Structure of the Table Mountain, and other Parts of the Peninsula at the Cape, drawn up by Professor Playfair from Observations by Captain Basil Hall.—Edinburgh Philosophical Transactions, vol. 7.

more deliberate investigation, by a more cautious observer, would also, I think, lead to similar conclusions. If he were one desirous to explain all geological phenomena by the agency of water, and be therefore disposed to consider the mixture of schistus and granite as resulting from cotemporaneous formation, he would hesitate over the imbedded masses of the former uncontaminated by their matrix, and would be still more perplexed by the fact that they can be separated without mixture. He would in vain seek in them those instances of the wedging of one rock into the other, which has been supposed confirmative of this opinion.* In looking at the principal line of junction between the granite and the schistus, he would see no gradual gradation of one into the other, but a distinct, though interrupted line of separation. This interruption he would find to be occasioned by veins of granite passing directly from the principal mass of granite into the schistus; in other words, the subjacent rock shooting into the superincumbent one.† Below this line he would indeed find an intimate mixture of the two rocks, occasioning a compound of a lighter colour than the schistus; such an appearance as might in itself be explained on the supposition of coeval formation. But he would meet a fact exceedingly unfavourable to this conclusion on a closer view; he would see here, as in the granite, two pieces of schistus of

* "The substance of the vein is to be observed mixed with and passing into that of the rock; and it wedges out in every direction in the mass of the rock, thus showing that it has not been filled from above or below, but is, as it were, a secretion from the rock itself. Such veins are denominated *cotemporaneous*, because they appear to have been formed almost at the same time with the rock in which they occur."— Elements of Geognosy, p. 236.

† "It is an incontrovertible fact, that no veins of the substance of a subjacent rock ever shoot into a superincumbent one; because the structure of the crust of the globe, from the oldest granite to the newest alluvial deposit, shows that veins are composed either of the finer substance of the rock in which they are contained, as is the case with those veins denominated cotemporaneous, or of substances more or less different from the rock, and which are frequently connected with mountain-masses or beds that *lie over* those rocks by which these veins are traversed. Thus no veins of granite are ever observed shooting from the oldest granite formation into the superincumbent gneiss; but veins of gneiss traverse through granite."— Elements of Geognosy, p. 237.

the natural dark colour imbedded in the mixed mass, and if he subjected them to the most accurate measurement, he would find their edge and angles corresponding. If he should leave the Table Mountain and visit Green Point, where the mixture of the two rocks is more intimate, he would still have to contend with facts scarcely explicable on the Neptunian theory. The appearance most likely to arrest his attention, would be the intimate intermingling of the two rocks in the large field, a portion of which is represented in page 289., and which he would probably consider, on a first view, not only explicable on the theory of aqueous formation, but as favourable to it. Here he could see that intermingling, and wedging, and gradation of one rock into the other, which his opinions require. But this conclusion would perhaps give way to a wider view of the phenomena around him. The leading feature stamped on all the facts at Green Point is exceeding commotion at the period of the mixture of the two formations. To conceive that they were deposited from a fluid in a state of rest, seems to me impossible for any one crediting the evidence of sense. Although it might perhaps be said, that their intimate mixture was the consequence of the agitation of the fluid whilst they were crystallizing. But supposing a Neptunian to have formed this inference, he must, I apprehend, yield it to one of the conditions of his own theory, and one of the laws of crystallization.* Bodies of a perfect crystalline structure can only be formed as a chemical deposit from a fluid in a state of rest. Rocks of an earthy fracture are formed from a fluid more or less agitated. What then are the characters of the rocks at the point of

* "We know the conditions necessary for the formation of a crystalline structure, and that rest and motion are the agents which assist or prevent its regular formation. Hence we may very fairly infer that the solution or ocean when it stood high over the earth was calm and undisturbed. During succeeding periods the solution appears to have become more and more agitated; yet at first it only prevented the perfection of the crystallization. As the water diminished in height its motions increased; its destroying powers reached to the surface of the earth and the crystalline shoots were destroyed, and thus the first mechanical productions were formed." Elements of Geognosy, p. 90.

junction? Certainly not those which would result from a deposit more or less mechanical. Their fracture is highly crystalline, and more so in proportion to the vicinity of the granite.

On the other hand, one who adopts the theory of the igneous origin of granite would find no difficulty in explaining all the phenomena which present themselves; he would consider them, indeed, as a beautiful illustration and a powerful confirmation of his doctrine. Those instances, so puzzling to a Neptunist, of the detached fragments of the rock which overlies, and its penetration by veins from below, and the crystalline fracture of the two rocks when compounded, would appear to him necessary to the verification of his opinions. That granite in fusion bursting through a superincumbent rock should split it into an infinite variety of fissures, and fill them, like melted metal poured into a mould, and should dislodge and insulate fragments, is an inference too obvious to be much dwelt upon in this place.

The beds of schistus represented in Plate N° 2., as rising into the granite, have on a first view so much the appearance of having pushed through the granite, that it might be imagined that the schistus had dislocated the granite rather than the granite the schistus, if a more extended research did not show the latter insulated in the former, and its strata vertical. But that the granite overspreads the schistus near their point of junction, and that the latter is not conformably deposited upon it, cannot, I think, be doubted by any one who traces the appearances in their successive order. In walking down to the sea, in the line of the principal junction of the two rocks, you first cross over granite of a very large grain unmixed with schistus for some distance, except that you occasionally observe a small imbedded mass of the latter rock. On approaching the beach you gradually find the granite altering its colour, from mixture with schistus, and at length including large beds; and when you reach the shore where the rocks are exposed to all the power of the ocean, and more battered away, the schistus becomes less and less mixed, and is at length entirely pure. At this spot,

on my first visit, I felt the fullest conviction that I distinctly traced the main body of the schistus sweeping under the granite along the margin of the sea; but on a second visit I could not verify my first observation. On my first visit the day was cloudy and the sea quiet; on my second, the sun shone bright, and was reflected by the breakers of a troubled sea dashing against the rocks. This important fact, therefore, still requires to be substantiated by other observations.

It is at the junction of the large-grained granite with the schistus that any doubts can be felt by the sceptical whether the granite overlies the schistus. No doubt can exist of the small-grained granite being spread in a thin but extensive sheet over it, as the breaking away of portions of this near its centre has exposed the schistus beneath. But as small-grained granite has been considered of later formation than the large-grained, this fact may be considered of little importance. I would venture to observe, however, respecting the formation of the small-grained granite at Green Point, that it is impossible to avoid the belief that it is coeval with the large-grained; it passes so gradually into it in some places, and is so indeterminately mixed with it in others, that the mind seeks in vain for any other conclusion respecting it. Granting their formation to have been cotemporaneous, it would not perhaps be very difficult to explain their difference of character on the Huttonian theory. It is, I believe, one of the acknowledged laws regarding the crystallization of bodies from a state of fusion, that their forms are more or less definite in proportion as the rate of cooling is slow. If the granite in fusion burst through the schistus, the greatest heat must have been at the point of junction near the great body of granite; and here, therefore, the more perfect crystalline forms should occur. The fact is consistent with the theory. The component parts of the large-grained granite, when they intermix with the schistus, retain their crystalline character, giving rise to the porphyritic rock before described.

The sheet of granite, on the contrary, spreading in a thin layer over the schistus, would cool with great rapidity and become a gra-

nite of less distinct crystalline characters; in other words, a granite of smaller grain. In this view the small-grained granite at Green Point might be considered in the condition of a vein from the large-grained. The same explanation will go far to explain the different charaters of the veins in Table Mountain. Those of the greatest width, in some places entirely, and in all much resemble the rock which gives them off. Those of a smaller or of a gradually diminishing width, are of a large grain at their origin, but become of a smaller grain as they recede from it; that is, they are of a less definite character where, according to the theory of the igneous origin of granite, they cooled with the greatest quickness.

But however well the condition of these rocks may be explained by the agency of fire, the operation of water is no less plainly pointed out by the horizontal strata of sandstone, and the appearances attending its junction with the granite. Yet whilst the general fact of the aqueous deposit of the great sandstone strata forming the summits of the Cape mountains, and their undisturbed rest since, cannot escape observation, it is a task of some difficulty to unravel all the phenomena attending their junction with the granite. Having endeavoured to point out their general order, I shall here venture to suggest those consequences to which they seem to lead.

The appearance which, from its universality, especially presses upon the notice, is the decomposed state of the constituents of granite, whether forming the bed immediately resting upon granite, or a part of the porphyritic conglomerate, resulting from their mixture with red sandstone. Three principal conclusions may, I think, be drawn respecting it. First, that the decomposition has not arisen from any late action of the elements; secondly, that it occurred before the deposition of the great sandstone formation; and, thirdly, that it happened when the surface of the granite, in a greater or less degree, formed the surface of the land.

That "the decomposition has not arisen from any late action of the elements," is proved by the great compactness and toughness of the rocks in which it occurs, and by the fact that granite in their

immediate vicinity, under equal or greater exposure, has suffered no decomposition.

That "the decomposition occurred before the deposition of the great sandstone formation," is the necessary consequence of the first conclusion; for if the sandstone was deposited on the granite before the decomposition of its constituents, whence could that decomposition subsequently arise; how especially could crystals of quartz become rounded, and how can be explained the formation of the conglomerate? The appearance indeed speaks for itself; it is self-evident that the surface of the granite was in a decomposed and disintegrated state, when its constituents mixed up with dark red sandstone.

But if this decomposition and disintegration of the rocks happened before the deposition of the sandstone, the hypothesis of Capt. Hall and Mr. Playfair*, that the sandstone was deposited upon the granite whilst at the bottom of the sea, and that it was subsequently raised in so gradual a manner as to have kept its relative situation with respect to the rocks on which it rests, can scarcely be admitted. For the granite, according to this supposition, must have been at that great depth, at which it belongs to no theory to suppose that such changes on the surfaces of rocks can occur. On the other hand, they are precisely those which we continually see rocks undergoing that are exposed to the weather and the action of torrents. Therefore the third conclusion respecting the appearances I have described may perhaps be safely drawn; namely, that the decomposition and disintegration of the granite occurred "when its surface formed, to a greater or less extent, the surface of the earth." And from this a necessary corollary follows; that the sand-

* "The introduction of the granite into the situation it now occupies must have taken place while the whole was deep under the level of the sea: this is evident from the covering of sandstone which lies on the granite to the thickness of 1500 feet; for there can be no doubt whatever that this last was deposited by water. After this deposition the whole must have been lifted up, as Capt. Hall supposes, with such quietness and regularity, and in so great a body, as not to disturb or alter the relative position of the parts." Account of the Structure of the Table Mountain in the Edinburgh Philosophical Transactions.

stone was deposited by the sea rising to an incalculable height above the granite. The phenomena attending the junction of the sandstone with the granite agrees with this view of the subject, and can be as satisfactorily explained on the Wernerian, as those attending the junction of the granite and schistus can on the Huttonian theory. The intermediate beds between the sandstone and granite are of a coarse earthy fracture. The superincumbent sandstone, on the contrary, becomes of a more crystalline structure in proportion as it recedes from them. These two facts are obviously conformable to the laws before quoted respecting the causes which modify crystallization, or which are necessary to the formation of rocks, by a deposit more or less mechanical. For the motion of the sea, being greater near its surface than at a great depth, would be chiefly influential in preventing any tendency to crystallization when it first flowed over the granite; but as it rose much above it, the subsequent deposits would be less agitated and acquire a more crystalline character. One more remark respecting the decomposed state of the constituents of granite may be made in this place; namely, that from whatever cause they acquired this state, they have not reassumed their crystalline forms, although subjected to enormous pressure for an incalculable period.

The appearances, then, which I have described, and the conclusions that I have ventured to draw, seem to point out four different eras, corresponding to as many separate conditions of the rocks constituting the peninsula of the Cape. The first, indefinite as to its commencement, continued whilst the schistus reposed at the bottom of the sea, and terminated when the granite in fusion burst through it and formed dry land. The second commencing at this epoch, terminated when the water rose above the granite. The third had its duration whilst the water stood high above the earth and deposited the sandstone. The fourth commenced with the retrocession of the water and the appearance of the present dry land, and will terminate with the existing order of things. Another consequence of the fact that I have cited appears to be, that the mountains at the Cape of

Good Hope exhibit phenomena illustrative and confirmative of certain positions both of the Huttonian and Wernerian theories, but only to be entirely explained by the agency of both the elements on which the respective systems are founded.

I shall now mention one or two other mineralogical facts which I noticed at the Cape, rather because any information respecting the geology of a part of the world so little explored is desirable, than because of their importance.

An excursion to Huyt's Bay was recommended to me for the purpose of examining some curious stalactical formations. In the company of Mr. Voicy, a gentleman to whom I owed many of the opportunities that I obtained of seeing the geological facts which I have described, I set out for the mountain where they occur, and in my way visited Great Constantia, interesting from being one of the two farms producing the wine bearing its name. We were received with much politeness by the manager of the estate, and conducted through the vineyards, which at that season of the year (June) exhibited only the bare trunks and branches of the vine, resembling leafless gooseberry bushes. From the vineyard we were led into the cellars, which had nothing extraordinary in their appearance, unless it was their extreme cleanliness and exact arrangement. From the cellars we were conducted into the house to examine a very fine specimen of stalactite which had been brought from the neighbourhood of Cape Hanglip. It was about ten feet high, tapering rapidly from its base, which measured about thirty inches in circumference. The cave whence it was brought abounds, it is said, in specimens of equal magnificence. From Constantia it was necessary to pass over a ridge of mountains, called the Steinberg, to reach Huyt's Bay. Our host took some pains to persuade us of the impracticability of passing it on horseback; but as he did not speak from his own experience, could not persuade us to forbear the attempt. We found the road sufficiently difficult, and were perhaps the first equestrians who attempted it, and would scarcely recommend any body to follow our example. The Steinberg consists, like all the other Cape

mountains, of horizontal strata of sandstone resting on granite. In passing over it, our attention was arrested by an immense vein of red oxyde of iron, six feet wide, and which we traced for upwards of one hundred feet.

Having crossed the Steinberg, we came within view of the mountain which was the object of our visit; and when about a quarter of a mile from it, reached a broad creek, formed by the sea; and were on the point of entering its shallowest part, when we were stopped by a man running towards us in great haste, and calling out to us not to stir. On coming up, he told us that we were on the verge of a quicksand, and directed us to take the deepest part of the rivulet close to the sea, where, he said, is always the firmest ground. Our friendly informant proved to be one of the Dutch boors, and invited us to his house close by, on our return from the mountain. Having crossed the creek, we were much gratified with the appearances which the mountain exhibited; but were prevented, by the apprehension of the flowing of the tide, from examining them with all the attention that I wished.

The face of the mountain fronting the sea, had all the appearance of a limestone rock; but when broken, proved a sandstone precisely similar to that which forms the horizontal strata of the rocks near Simon's Town, but was cased with a stalactical deposition by water which constantly overflows it. We also found in a deep ravine some beautiful examples of stalactite, formed by a calcareous deposit on the fibrils of roots, penetrating the roofs of small caverns worn in the rock. A floor of tabular stalactite also covered the ground for several yards about the base of the mountain, and beautiful imitations of moss produced by the splashing of water falling from a great height, were also abundant.

I was unable to account for these appearances at the period of my visit, as I could discover no limestone from which the water could derive its calcareous impregnation. I have been since assured that the top of the mountain is covered with a bed of com-

minuted shell and sand: if this be the fact, their explanation is obvious.

Other appearances of somewhat more difficult explanation were discovered and pointed out to me by Captain Maxwell near Simon's Town. Somewhat to the eastward of the town is a large bank, which rises from the sea to the height probably of a hundred feet, and seems to have been formed by an accumulation of shell and sand brought up by the south-east wind. That such is the origin of the bank, is probable from its being exposed to the direct influence of this wind, and from its very loose structure. I at first thought it possible that it might have resulted from the decomposition of sandstone; but relinquished this opinion on finding the fragments of shell extending much below the surface. On this bank a great number of calcareous cylindrical bodies lie scattered about, and at first sight resemble the bones of animals bleached and disorganized by exposure to the air. On a closer examination many of them are found to be branched; and others are discovered rising through the soil, and ramifying from a stem beneath thicker than themselves. Their vegetable origin immediately suggests itself, and is confirmed by a further enquiry. They are seldom solid, their centres being either hollow or filled with a blackish granular substance, which in many specimens, except in colour, much resembles the substance called roastone by mineralogists. Their outer crust is chiefly composed of a large proportion of sand, and a small proportion of calcareous matter, and in many specimens contains fragments of ironstone, and quartz an inch square. That they are really incrustations formed on vegetables which have afterwards decayed, is proved by the different degrees of change which the internal parts of different specimens have undergone. In some the organization of the plant sufficiently remains to leave its nature unequivocal, and near the sea the very commencement of the process of incrustation may be witnessed on the large *Fuci* which strew the shore.

Similar bodies have been found by Vancouver, Flinders, and Péron * on the shores of New Holland, at considerable elevations. The two first-named travellers considered them all as coral, and as proofs of the land having been lately withdrawn from the dominion of the waters. The last has described two kinds of substances; the one he considers coral, and the other as incrustations on vegetables. Of the latter he gives ample descriptions, and explains the formation in a manner which appears to be satisfactory, and to apply to the substances found by Captain Maxwell near Simon's Town. He supposes that the shells cast on the shore and submitted to the double influence of an ardent sun and penetrating moisture, undergo a species of chemical decomposition; and having lost a portion of their carbonic acid, approach to the state of the lime used in some calcareous cements, and in this state unite into a compost with quartz sand, and form incrustations on the surfaces of plants. In another passage he illustrates the steps of the process by a description of the appearances of several specimens. "In breaking," he remarks, "the branches of these species of Lythophytes, when the incrustation is recent, we observe the woody texture contained in a solid case, and without any remarkable alteration; but in proportion as the calcareous envelope increases, the wood becomes disorganized, and changes insensibly into a dry and black powder." From this state he supposes the centre gradually to increase in solidity till the whole mass becomes a mere sandstone, and nothing but an arborescent form indicates the ancient state of vegetation. †

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* Vancouver's Voyages, Vol. i. p. 48 et 49. Voyage to Terra Australis, by Captain Flinders. Vol. i. p. 63. Voyages aux Terres Australes. Vol. ii. p. 169.

† Les nombreux coquillages qui pullulent dans ces mers, rejetés par millions sur la grève, soumis à la double influence d'un soleil ardent et d'une humidité pénétrante, ne tardent pas à subir une espèce de décomposition chimique dans leur substance. En perdant une portion plus ou moins considérable de leur acide carbonique, ils tendent à se rapprocher de cet état où est la chaux quand nous l'employons pour servir de base à nos ciniens; et ce n'est pas en ce seul point que les procédés de la nature se rapprochent

I have assumed that the incrustations near Simon's Town are of a similar nature to those found in New Holland, because the descriptions of authors correspond with the appearances I have witnessed, and because I have compared a specimen from New Holland with those I obtained at the Cape, and can trace no essential difference either in their external characters or chemical composition. Péron appears to have been the only one who has supposed any of the New Holland specimens of vegetable origin; and even he considers the calcareous bodies discovered on Bald Head and on the island of Timor, in which they occur in large quantities at considerable elevations, as really corals, but has not stated any reasons for his opinion, beyond their general resemblance to those bodies. On Bald Head, however, Captain Flinders discovered "two broken columns of stone, three or four feet high, formed like stumps of trees, and of a thickness superior to the body of a man;" appearances elsewhere found by Péron, and described by him as being of vegetable origin.

In the hope of obtaining more precise information respecting the nature of the Cape specimens than could be derived from their external characters, I submitted them to the analysis used by Mr. Hatchett* to determine the composition of different madrepores,

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de ceux dont l'industrie humaine fait usage: de même que, dans nos ateliers, c'est en mêlant avec le sable du rivage ces débris calcaires pulvérisés par l'action des flots, qu'elle parvient à former un véritable ciment calcaréo-quartzeux, d'une qualité supérieure, il est vrai, mais très-analogue d'ailleurs à ceux que l'art produit. Voyages aux Terres Australes. Tom. II. p. 169 et 70.

En brisant les rameaux de ces espèces de lithophytes lorsque l'incrustation est récente, on apperçoit le tissu ligneux engagé dans un étui solide, et sans aucune altération remarquable; mais à mesure que l'enveloppe calcaire augmente, le bois se désorganise et se change insensiblement en un de détritus acide et noirâtre: alors l'intérieur du tube est encore vide, et conserve un diamètre à-peu-près égal à celui de la branche qui lui a servi de moule; enfin le tube finit par s'obstruer et se remplir de parties quartzeuses et calcaires: quelques années s'écoulent et tout est converti en une masse de grès. A cette dernière époque, la forme arborescente seule peut rappeler l'état ancien de végétation. Ibid. p. 171.

* Philosophical Transactions for 1800.

with the following results: When put into dilute nitric acid, a portion of them dissolved with great effervescence, leaving a residuum of fine sand of a white colour at the bottom of the vessel, covered by a layer of brown flocculent matter. The supernatant liquor was quite transparent. On treating this liquor with pure ammonia, no precipitation took place.* Treated with carbonate of ammonia, it threw down a white precipitate, which proved to be carbonate of lime. The layer resting on the sand was dissipated by heat, and burnt with the smell of vegetable smoke. The sand was composed of grains of quartz. These were the general results of the experiments, whether made with the outer coat or the interior part of the substance. When the outer part of the crust was used, the proportion of sand increased; when the inner part was used, the dark-coloured flocculent layer increased. Subjected to the action of the blowpipe in their entire state, these substances, under a gentle heat, first blackened; at a higher heat threw off the smell of a vegetable smoke, and became perfectly white. From these experiments it may, I apprehend, be deduced, that they consist of carbonate of lime, quartz, and vegetable matter; a conclusion that accords with the circumstances under which they are found, and their frequent arborescent character. The New Holland specimen, subjected to a similar analysis, gave precisely similar results. As this specimen, for which I am indebted to Mr. Brown, who brought it from Bald Head, has a remarkable resemblance to coral both in form and closeness of texture, it may perhaps be considered a fair example of those substances considered coral by Vancouver, Flinders, and Péron. If this be admitted, it will follow that the reasoning is incorrect which is founded on their supposed submarine origin.

* This statement requires to be somewhat modified; for occasionally a little oxide of iron was thrown down, arising from its mixture with the sand forming the crust, and giving the supernatant liquor the colour of brandy.

The Embassy re-embarked on board the Cæsar on the 11th of June. In rounding the Cape we were followed by numbers of the huge albatross. The wings of one of the smallest of these birds that hovered about the ship, and was taken in our outward-bound voyage by Mr. D'Warris, an officer of the Alceste, measured ten feet from one extremity to the other.

CHAPTER XII.

Of St. Helena, where we arrived on the 27th, I have not much to relate. The Embassy in visiting this island were chiefly desirous to obtain an interview with Napoleon, which being delayed, although constantly expected, till the day before our departure, they had little opportunity of examining its scenery. This is of a very peculiar kind, and difficult to describe to those who have never visited a volcanic country. It consists in a great measure of barren ridges, generally bare but sometimes covered with a short grass, inclosing deep ravines. The cabbage and the gum tree are almost the only arborescent plants growing wild on the island; and the latter, in its hoary and abortive look, seems formed to harmonize with its unattractive situation. But if the island be defective in those natural beauties which belong to a luxuriant vegetation, it is not devoid of picturesque views. The ridges often rising to the height of fifteen hundred feet, are in some places nearly perpendicular throughout, in others gently sloping, and occasionally are covered with hillocks. Waterfalls often occur, and gushing over the black surface of the rocks, are seen at a great distance. In some favoured glens, villas surrounded by the vegetation of all parts of the globe, are seen nestling amidst the surrounding desolation.

Of these, Plantation House, the seat of the Governor, is certainly the most attractive. It looks towards the sea, over a green declivity, inclosed by two ridges of rock clothed with beautiful pines. Amongst the innumerable plants that decked its grounds, I distinguished the oak of Great Britain, the pine of China, and the willow of New Holland, thriving in full and equal vigour. The magnificent *Ficus religiosus*, the *Canarium commune*, the *Cassuarina equi-*

setifolia, the *Jatropha elastica*, or India-rubber tree, the *Croton sebiferum*, or tallow-tree, the *Camellia oleifera* and *Japonica*, the tea-plant, and various species of *Cassia* and *Mimosa* grew in this enchanting spot in all their native beauty. In fact, every quarter of the world seemed to have afforded its choicest plants; and every plant to have found a congenial soil and climate. Such a peculiar adaptation of circumstances to the healthy growth of plants from all latitudes is the probable consequence of the equal temperature which prevails at the elevation of Plantation House, where the thermometer seldom rises above 78° or falls below 66°. Thus the productions of hot climates are not blasted by cold, nor those of the temperate zones withered by heat.

The geological facts observable in St. Helena are not many, or of very great importance. Those which generally present themselves are the alternate beds of lava, which seem to constitute whole mountains; and the immense perpendicular ridges of black rock, which traverse like huge walls the whole extent of the island. The beds are often exposed at the waterfalls, and exhibit a very definite, and, as far as I could trace, undeviating order. In a waterfall near the Friar's Ridge I had a good opportunity of examining them. A face of rock about a hundred feet in height was made up of successive beds in the following order: the lowermost was composed of a red ochreous clay of considerable depth; resting upon this, and passing into it, was a bed of light porous lava in fragments; on this rested a bed of compact lava, scarcely at all porous, and passing into a superincumbent bed of very compact dark-coloured rock, not distinguishable from basalt.

The Friar's Ridge owes its name to several masses of rock, which, piled on each other to the height of about twenty feet, rest insulated on its top, and seen from below have the appearance of a monk enveloped in his cowl: a stranger often mistakes them for a man standing on its summit. On a near approach they seem to alter their form, and strikingly represent a gipsey with a child at her back. On a close examination they are found to consist of

rhomboidal masses of the same rock which constitutes the ridge. This rock is basalt, every where divided into columnar distinct concretions. Those which I examined were pentagonal, about a foot long, fitting each other with exact adjustment, and forming by their aggregation very perfect columns. The ridge would perhaps be called an enormous whin dyke. On one side it looks into a valley, which has received the homely but significant appellation of "Break-neck Valley;" and a more frightful uninterrupted precipice of fifteen hundred feet cannot be imagined. The other side, by which it is ascended, is of less abrupt declivity, and not more than five or six hundred feet above the level of the bottom of the ravine formed between it and a ridge of lower elevation. The ravine gradually slopes towards the sea, and often increases in depth in a very abrupt stair-like manner. Perpendicular faces thus appear, which exhibit the successive beds of clay and lava which I have already described.

Of our interview with Napoleon I have little to tell. Excepting Lord Amherst and Mr. Ellis, who were admitted to separate audiences, the members of the Embassy were not in his presence more than a quarter of an hour. Our reception was as stately as circumstances admitted. A servant in the livery of Napoleon when in the zenith of glory, stood like the phantom of former splendour to receive us at the door of the outer apartment. Conducted by Bertrand, we were received in an anti-room by Count Montholon and General Gourgaud, both young men of interesting appearance. Lord Amherst was immediately ushered by Bertrand into an inner apartment to the presence of Buonaparte. An hour having elapsed, Mr. Ellis was introduced, and in less than half an hour afterwards the remainder of the party was admitted. A circle being formed about Napoleon, he walked round, addressing successively each person on some subject connected with his particular pursuit or situation in the Embassy, and gave a neat and complimentary turn to all his remarks. His object was evidently to please as much as possible, and he certainly succeeded. But had we left the island without

knowing that he had obtained a list of the persons of the Embassy, and of their particular situations in it, previously to our introduction to him, we should have gone away with a much higher opinion of his address in conforming the subject of his conversation to individual characters.

Buonaparte's person had nothing of that morbid fulness which I had been led to look for. On the contrary, I scarcely recollect to have seen a form more expressive of strength and even of vigour. It is true that he was very large, considering his height, which is about five feet seven inches; but his largeness had nothing of unwieldiness. The fine proportion of his limbs, which has been often noticed, was still preserved. His legs, although very muscular, had the exactest symmetry. His whole form, indeed, was so closely knit, that firmness might be said to be its striking characteristic. His standing posture had a remarkable statue-like fixedness about it, which seemed scarcely to belong to the graceful ease of his step. The most remarkable character of his countenance was, to me, its variableness. Buonaparte has the habit of earnestly gazing for a few seconds upon the person whom he is about to address; and whilst thus occupied holds his features in perfect repose. The character of his countenance in this state, especially when viewed in profile, might be called settled design. But the instant that he enters into conversation his features express any force or kind of emotion with suddenness and ease. His eye, especially, seems not only to alter its expression, but its colour. I am sure, had I only noticed it while the muscles of the face, and particularly of the forehead, were in play, I should have called it a very dark eye; on the contrary, when at rest, I had remarked its light colour and peculiar glary lustre. Nothing, indeed, could better prove its changeable character than the difference of opinion which occurred amongst us respecting its colour. Although each person of the Embassy naturally fixed his attention on Napoleon's countenance, all did not agree on the colour of his eyes.

There was nothing in the appearance of Buonaparte which led us

to think that his health had at all suffered from his captivity. On the contrary, his repletion seemed to be the consequence of active nourishment. His form had all that tone, and his movement all that elasticity, which indicate and spring from powerful health. Indeed, whatever sympathy we felt for the situation of any of the prisoners, received no increase from any commiseration for their bodily sufferings: they were all in excellent plight.

On the morning of the 29th, the day after our interview with Napoleon, we took leave of St. Helena, and on the 7th of July made the island of Ascension.

After leaving St. Helena we imagined that no coast could appear comparatively barren; but found the island of Ascension still more dreary. On approaching the former, a speck of green here and there relieved the prevailing sterility; but the shores of the latter only exhibited hills formed of red volcanic ash, and columnar masses of black lava rising through it.

A half hour's visit to the island was my only opportunity of observing its interesting characters. I landed amidst some large rocks of vesicular lava, which projected from a sandy beach into the sea. Passing on towards one of the red conical hills, I found lava in distinct blocks, and ridges, every where pushing through the surface. The more compact, of a very basaltic character, contained crystals of olivine. The more vesicular had crystals resembling zeolite. The surface of the hill was composed of small masses of a red and very friable cinder, resting on a powder of the same substance. A short distance up its acclivity, two white bodies, not a little puzzling when seen at a distance, seem to rise through the soil. On examination they proved to be tombstones, erected to the memory of two seamen who had died in their vessels off the island. These stones were curious from being sonorous, and having been formed from considerable beds, or rather slabs of stone, found on the beach, and which are formed of the fragments of shells cohering together. They exactly resemble, except in being of a coarser grain, the rock in which the human skeletons of Guadaloupe have been found.

Several varieties of obsidian and pitchstone are found on the island in great quantities, but I could not learn under what circumstances.*

I found only one plant in my walk, a species of *Euphorbia*. On the higher hills plants grow in sufficient abundance to feed many goats.

Turtle frequent the island from February to July, and are of large size. Those taken on board the Cæsar weighed from two to four hundred weight. The chief means of subsistence are goats, turtle, and fish. Attempts have been made to raise vegetables on the hills, but they have had little success in consequence of the rats with which the island abounds.

Since the detention of Buonaparte the island has been fortified by a battery of fourteen guns erected on a projecting rock; and the Spy sloop, at the period of our visit, had been for a long time at anchor to leeward of the island.

The Cæsar made sail early in the afternoon, and continued on her voyage to England.

Our impatience to finish the remainder of our voyage, greater in proportion as we approached its termination, was much lessened by the amusement we derived from watching the habits of our shipmate, the Orang-Outang. This animal, although described by Edwards†, Vosmaer‡, Buffon §, Camper‖, F. Cuvier¶, Tillesius**, and others, has not yet been so distinctly and fully pourtrayed either in his external characters or peculiar habits, as to render all further

* The obsidian, which is most abundant, and of which I obtained specimens from an officer stationed on the island, is of a velvet black colour, and of a perfect vitreous lustre. Under the blowpipe it intumesces greatly, loses its black colour, and passes into a white porous mass. Its specific gravity is 2.312. The pitchstone becomes of a darker colour under the blowpipe, and porous on the surface, but melts into a slag with great difficulty. Its specific gravity is 2.4.

† Gleanings. London, 1758. p. 6.

‡ Description de l'espèce de singe, aussi singulier que très rare, nommé Orang-Outang de l'isle de Borneo par Vosmaer.

§ Buffon, 4to. Suppl. Tom. vii. p. 1. pl. 1.

‖ Natuunkundige verhandelingen van Petrus Camper over der Orang-Outang.

¶ Annales des Museum, tom. xvi. p. 46.

** Appendix to Krusentern's Voyage.

account of him either uninteresting or unnecessary. The causes of the defectiveness of these descriptions have been the youth of the animals which have arrived in Europe alive, and the short time they have survived after reaching the observation of those competent to give a history of their habits. A cause of a similar kind will render my observations of the one now in England less valuable than they would be at a future period, when the animal shall have obtained, beyond dispute, his full stature, and the entire developement of his intellectual powers. But as a description of his external characters, his dimensions, and intellectual manifestations at the present time, will serve as a standard of comparison on a future occasion, and because his actions on board ship were less restrained, and therefore more natural, than since his arrival in England, I shall make no further apology to my reader for introducing in this place a description which may seem to be little connected with the main object of this work.

For the possession of this rare animal the scientific world is indebted to Captain Methuen, who brought him from Banjarmassing on the south coast of Borneo, to Java; and in the hope of aiding the cause of science placed him in my possession, for the purpose of being conveyed to England. The natives informed Captain Methuen that he had been brought from the highlands of the interior, and that he was very rare, and difficult to take; and they evidently considered him a great curiosity, as they flocked in crowds to see him.

It may be necessary to acquaint some of my readers that the Orang-Outang of Borneo has been confounded by many writers with an animal that inhabits Africa, and which has also been called Orang-Outang, but is more correctly known by the name of Pongo. The Pongo, which has been minutely described by Tyson*, differs anatomically from the subject of this description, and in having large ears and black hair.

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* Anatomy of a Pygmy compared with that of a Monkey, an Ape, and a Man, by Edward Tyson, M.D. F.R.S. 2nd ed. London, 1751.

Orang-Outang* is a Malay phrase, signifying "wild man," and, should therefore be restricted to the animal, which, according to our present information, is found exclusively on Borneo. The portrait in the next page will give a correct notion of his general characters, and assist the description. It was taken soon after his arrival in this country, when his hair was longer than it now is in consequence of a disease in the skin.

The present height of the animal, judging from his length when laid on a flat surface, and measured from his heel to the crown of his head, is two feet seven inches.

The hair of the Orang-Outang is of a brownish red colour, and covers his back, arms, legs, and outside of his hands and feet. On the back it is in some places six inches long, and on his arms five. It is thinly scattered over the back of his hands and feet, and is very short. It is directed downwards on the back, upper arm and legs, and upwards on the fore arm. It is directed from behind forwards on the head, and inwards on the inside of the thighs. The face has no hair except on its sides, somewhat in the manner of whiskers, and a very thin beard. The middle of the breast and belly was naked on his arrival in England, but has since become hairy. The shoulders, elbows, and knees, have fewer hairs than other parts of the arms and legs. The palms of the hands and feet are quite naked.

The prevailing colour of the animal's skin, when naked or seen through the hair, is a bluish gray. The eyelids and margin of the mouth are of a light copper colour. The inside of his hands and feet are of a deep copper colour. Two copper-coloured stripes pass from the armpits down each side of the body as low as the navel.

The head viewed in front, is pear-shaped, expanding from the chin upwards, the cranium being much the larger end. The eyes are close together, of an oval form, and dark brown colour. The

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* I use this mode of spelling in conformity with general usage, although *Orang-Utan* would, according to the high authority of Mr. Marsden, be more correct orthography. See History of Sumatra, p. 117.

eyelids are fringed with lashes, and the lower ones are saccular and wrinkled. The nose is confluent with the face, except at the nostrils, which are but little elevated: their openings are narrow and oblique. The mouth is very projecting, and of a roundish mammillary form. Its opening is large, but when closed is marked by little more than a narrow seam. The lips are very narrow, and scarcely perceptible when the mouth is shut. The chin projects less than the mouth: below it, a pendulous membrane gives the appearance of a double chin, and swells out when the animal is angry or much pleased. Each of the jaws contains twelve teeth, namely, four incisive teeth, the two middle ones of the upper jaw being twice the width of the lateral; two canine, and six double teeth. The ears are small, closely resemble the human ear, and have their lower margins in the same line with the external angles of the eyes.

The chest is wide compared with the pelvis: the belly is very protuberant. The arms are long in proportion to the height of the animal, their span measuring full four feet seven inches and a half. The legs are short compared with the arms.

The hands are long, compared with their width, and with the human hand. The fingers are small and tapering: the thumb is very short, scarcely reaching the first joint of the fore finger. All the fingers have very perfect nails of a blackish colour and oval form, and exactly terminating with the extremities of the fingers. The feet are long, resemble hands in the palms, and in having fingers rather than toes, but have heels resembling the human. The great toes are very short, are set on at right angles to the feet close to the heel, and are entirely without nails.*

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* In the month of September, 1817, I took the dimensions of some of the parts of this animal, but under circumstances in which I could not make them very numerous. I have thought it proper to exhibit them, in conjunction with others taken on the 28th of May, 1818:—

The orang-outang of Borneo is utterly incapable of walking in a perfectly erect posture. He betrays this in his whole exterior conformation, and never wilfully attempts to counteract its tendency.

		1817. Inches.	1818. Inches.
Height.	Measured from the vertex to the bottom of the heel ..	28	31·5
Span.	Of the arms		55·5
Head.	From between the eyebrows to the junction of the head with the neck	7	7·5
	From the tip of one ear to that of another	7	7·2
	Circumference immediately above the ears	14·3	15
	——— round the chin, close to the neck and over the vertex		32
	From ear to ear, across the forehead		8
	From the lower margin of the ear to the middle of the lower margin of the chin		5·3
	Facial angle, 57°		
Body.	Circumference round the shoulders		30
	Under the arm-pits		25
	Round the most projecting part when sitting		28
	——— when standing with the arms raised above the head		24
	Round the hips		9
	Distance between the nipples		8
	Length, from top of the sternum to the pubis		13·5
	——— of the back, from setting on of the head to the end of the *os coccygis*		16
Arms.	Length from the armpit to the end of the middle finger		25
	——— of the upper arm		9
	——— fore arm		10
	Circumference of the shoulder		10·2
	——— middle of upper arm		8·2
	——— fore arm		9
Hands.	Length from the wrist to the middle finger	6·3	6·7
	——— of the palm		3·9
	——— of middle finger, measured from the knuckle		4·3
	——— of thumb		1·5
	Circumference of the palm		7
Legs.	Length from groin to the instep	11·5	13
	——— to the knee		6·5
	——— from knee to the sole of the foot		7·4
	Greatest circumference of the thigh		12
	——— leg		8
Feet.	Length from heel to the end of middle toe	7·5	8·5
	Circumference close to the great toe		7
	Length of great toe	1	1·2

His head leaning forward, and forming a considerable angle with the back, throws the centre of gravity so far beyond the perpendicular, that his arms, like the fore-legs of other animals, are required to support the body. So difficult indeed is it for him to keep the upright position for a few seconds, under the direction of his keeper, that he is obliged, in the performance of his task, to raise his arms above his head, and throw them behind him to keep his balance. His progressive motion on a flat surface is accomplished by placing his bent fists upon the ground and drawing his body between his arms: moving in this manner, he strongly resembles a person decrepid in the legs, supported on stilts. In a state of nature, he probably seldom moves along the ground; his whole external configuration showing his fitness for climbing trees and clinging to their branches. The length and pliability of his fingers and toes enable him to grasp with facility and steadiness; and the force of his muscles empowers him to support his body for a great length of time by one hand or foot. He can thus pass from one fixed object to another, at the distance of his span from each other, and can obviously pass from one branch of a tree to another, through a much greater interval. In sitting on a flat surface, this animal turns his legs under him in the manner expressed by the engraving. In sitting on the branch of a tree or on a rope, he rests on his heels, his body leaning forward against his thighs. This animal uses his hands like others of the monkey tribe.

It is necessary to remark, that I cannot answer for the precise accuracy of the annexed measurements, as the restlessness of the animal and the fear of injuring him by violent coercion, rendered it very difficult to take them. Those made indeed in May, 1818, were often repeated, and are therefore no doubt close approximations to the truth.

This animal had, on his arrival in England, only ten teeth in each jaw. In December he cut his two hindmost double teeth, making up twelve in each jaw. In December, 1817, he weighed thirty-five pounds and a half; in May, 1818, he weighed forty-three, having increased seven pounds and a half in five months, and having grown, as may be seen by the table, full three inches in height.

The orang-outang, on his arrival in Java from Batavia, was allowed to be entirely at liberty till within a day or two of being put on board the Cæsar to be conveyed to England; and whilst at large, made no attempt to escape; but became violent when put into a large railed bamboo cage for the purpose of being conveyed from the island. As soon as he felt himself in confinement, he took the rails of the cage into his hands, and shaking them violently endeavoured to break them in pieces; but finding that they did not yield generally, he tried them separately, and having discovered one weaker than the rest, worked at it constantly till he had broken it, and made his escape. On board ship an attempt being made to secure him by a chain tied to a strong staple, he instantly unfastened it, and ran off with the chain dragging behind; but finding himself embarrassed by its length, he coiled it once or twice, and threw it over his shoulder. This feat he often repeated, and when he found that it would not remain on his shoulder, he took it into his mouth.

After several abortive attempts to secure him more effectually, he was allowed to wander freely about the ship, and soon became familiar with the sailors, and surpassed them in agility. They often chased him about the rigging, and gave him frequent opportunities of displaying his adroitness in managing an escape. On first starting, he would endeavour to outstrip his pursuers by mere speed, but when much pressed, elude them by seizing a loose rope, and swinging out of their reach. At other times he would patiently wait on the shrouds or at the mast-head till his pursuers almost touched him, and then suddenly lower himself to the deck by any rope that was near him, or bound along the main-stay from one mast to the other, swinging by his hands, and moving them one over the other. The men would often shake the ropes by which he clung with so much violence as to make me fear his falling, but I soon found that the power of his muscles could not be easily overcome. When in a playful humour, he would often swing within arm's length of his pursuer, and having struck him with his hand, throw himself from him.

Whilst in Java, he lodged in a large tamarind-tree near my dwelling; and formed a bed by intertwining the small branches and covering them with leaves. During the day, he would lie with his head projecting beyond his nest, watching whoever might pass under, and when he saw any one with fruit, would descend to obtain a share of it. He always retired for the night at sun-set, or sooner if he had been well fed; and rose with the sun, and visited those from whom he habitually received food.

On board ship he commonly slept at the mast-head, after wrapping himself in a sail. In making his bed, he used the greatest pains to remove every thing out of his way that might render the surface on which he intended to lie uneven; and having satisfied himself with this part of his arrangement, spread out the sail, and lying down upon it on his back, drew it over his body. Sometimes I pre-occupied his bed, and teazed him by refusing to give it up. On these occasions he would endeavour to pull the sail from under me or to force me from it, and would not rest till I had resigned it. If it was large enough for both, he would quietly lie by my side. If all the sails happened to be set, he would hunt about for some other covering, and either steal one of the sailors' jackets or shirts that happened to be drying, or empty a hammock of its blankets. Off the Cape of Good Hope he suffered much from a low temperature, especially early in the morning, when he would descend from the mast, shuddering with cold, and running up to any one of his friends, climb into their arms, and clasping them closely, derive warmth from their persons, screaming violently at any attempt to remove him.

His food in Java was chiefly fruit, especially mangostans, of which he was excessively fond. He also sucked eggs with voracity, and often employed himself in seeking them. On board ship his diet was of no definite kind. He ate readily of all kinds of meat, and especially raw meat; was very fond of bread, but always preferred fruits when he could obtain them.

His beverage in Java was water; on board ship, it was as diver-

sified as his food. He preferred coffee and tea, but would readily take wine, and exemplified his attachment to spirits by stealing the Captain's brandy-bottle: since his arrival in London, he has preferred beer and milk to any thing else, but drinks wine and other liquors.

In his attempts to obtain food, he afforded us many opportunities of judging of his sagacity and disposition. He was always very impatient to seize it when held out to him, and became passionate when it was not soon given up; and would chase a person all over the ship to obtain it. I seldom came on deck without sweetmeats or fruit in my pocket, and could never escape his vigilant eye. Sometimes I endeavoured to evade him by ascending to the mast-head, but was always overtaken or intercepted in my progress. When he came up with me on the shrouds, he would secure himself by one foot to the rattling, and confine my legs with the other, and one of his hands, whilst he rifled my pockets. If he found it impossible to overtake me, he would climb to a considerable height on the loose rigging, and then drop suddenly upon me. Or if, perceiving his intention, I attempted to descend, he would slide down a rope and meet me at the bottom of the shrouds. Sometimes I fastened an orange to the end of a rope, and lowered it to the deck from the mast-head; and as soon as he attempted to seize it, drew it rapidly up. After being several times foiled in endeavouring to obtain it by direct means, he altered his plan. Appearing to care little about it, he would remove to some distance, and ascend the rigging very leisurely for some time, and then by a sudden spring catch the rope which held it. If defeated again by my suddenly jerking the rope, he would at first seem quite in despair, relinquish his effort, and rush about the rigging, screaming violently. But he would always return, and again seizing the rope, disregard the jerk, and allow it to run through his hand till within reach of the orange; but if again foiled, would come to my side, and taking me by the arm, confine it whilst he hauled the orange up.

This animal neither practises the grimace and antics of other

monkeys, nor possesses their perpetual proneness to mischief. Gravity approaching to melancholy, and mildness, were sometimes strongly expressed in his countenance, and seem to be the characteristics of his disposition. When he first came amongst strangers, he would sit for hours with his hand upon his head, looking pensively at all around him; or when much incommoded by their examination, would hide himself beneath any covering that was at hand. His mildness was evinced by his forbearance under injuries, which were grievous before he was excited to revenge; but he always avoided those who often teazed him. He soon became strongly attached to those who kindly used him. By their side he was fond of sitting; and getting as close as possible to their persons, would take their hands between his lips, and fly to them for protection. From the boatswain of the Alceste, who shared his meals with him, and was his chief favourite, although he sometimes purloined the grog and the biscuit of his benefactor, he learned to eat with a spoon; and might be often seen sitting at his cabin-door enjoying his coffee, quite unembarrassed by those who observed him, and with a grotesque and sober air that seemed a burlesque on human nature.

Next to the boatswain, I was perhaps his most intimate acquaintance. He would always follow me to the mast-head, whither I often went for the sake of reading apart from the noise of the ship; and having satisfied himself that my pockets contained no eatables, would lie down by my side, and pulling a topsail entirely over him, peep from it occasionally to watch my movements.

His favourite amusement in Java was in swinging from the branches of trees, in passing from one tree to another, and in climbing over the roofs of houses; on board, in hanging by his arms from the ropes, and in romping with the boys of the ship. He would entice them into play by striking them with his hand as they passed, and bounding from them, but allowing them to overtake him and engage in a mock scuffle, in which he used his hands, feet, and mouth. If any conjecture could be formed from these frolicks of his mode of attacking an adversary, it would appear to be his first

object to throw him down, then to secure him with his hands and feet, and then wound him with his teeth.

Of some small monkeys on board from Java he took little notice, whilst under the observation of the persons of the ship. Once indeed he openly attempted to throw a small cage, containing three of them, overboard; because, probably, he had seen them receive food of which he could obtain no part. But although he held so little intercourse with them when under our inspection, I had reason to suspect that he was less indifferent to their society when free from our observation; and was one day summoned to the top gallant yard of the mizen-mast to overlook him playing with a young male monkey. Lying on his back, partially covered with the sail, he for some time contemplated, with great gravity, the gambols of the monkey which bounded over him; but at length caught him by the tail, and tried to envelope him in his covering. The monkey seemed to dislike the confinement, and broke from him, but again renewed its gambols, and although frequently caught, always escaped. The intercourse however did not seem to be that of *equals*, for the orang-outang never condescended to romp with the monkey as he did with the boys of the ship. Yet the monkeys had evidently a great predilection for his company; for whenever they broke loose, they took their way to his resting-place, and were often seen lurking about it, or creeping clandestinely towards him. There appeared to be no gradation in their intimacy; as they appeared as confidently familiar with him when first observed as at the close of their acquaintance.

But although so gentle when not exceedingly irritated, the orang-outang could be excited to violent rage, which he expressed by opening his mouth, showing his teeth, seizing and biting those who were near him. Sometimes indeed he seemed to be almost driven to desperation; and on two or three occasions committed an act, which, in a rational being, would have been called the threatening of suicide. If repeatedly refused an orange when he attempted to take it, he would shriek violently and swing furiously about the ropes; then return and endeavour to obtain it; if again refused,

he would roll for some time like an angry child upon the deck, uttering the most piercing screams; and then suddenly starting up, rush furiously over the side of the ship, and disappear. On first witnessing this act, we thought that he had thrown himself into the sea; but on a search being made, found him concealed under the chains.

I have seen him exhibit violent alarm on two occasions only, when he appeared to seek for safety in gaining as high an elevation as possible. On seeing eight large turtle brought on board, whilst the Cæsar was off the Island of Ascension, he climbed with all possible speed to a higher part of the ship than he had ever before reached; and looking down upon them, projected his long lips into the form of a hog's snout, uttering at the same time a sound which might be described as between the croaking of a frog and the grunting of a pig. After some time he ventured to descend, but with great caution, peeping continually at the turtle, but could not be induced to approach within many yards of them. He ran to the same height and uttered the same sounds on seeing some men bathing and splashing in the sea; and since his arrival in England, has shown nearly the same degree of fear at the sight of a live tortoise.

Such were the actions of this animal, as far as they fell under my notice during our voyage from Java; and they seem to include most of those which have been related of the orang-outang by other observers. I cannot find, since his arrival in England, that he has learnt to perform more than two feats which he did not practise on board ship, although his education has been by no means neglected. One of these is to walk upright, or rather on his feet, unsupported by his hands; the other, to kiss his keeper. I have before remarked with how much difficulty he accomplishes the first, and may add, that a well-trained dancing dog would far surpass him in the imitation of the human posture. I believe that all the figures given of orang-outangs in an unpropped erect posture, are wholly unnatural. Some writer states, that an orang-outang which he describes gave "real kisses;"

and so words his statement, that the reader supposes them the natural act of the animal. This is certainly not the case with the orang-outang which I have described. He imitates the act of kissing by projecting his lips against the face of his keeper, but gives them no impulse. He never attempted this action on board ship, but has been taught it by those who now have him in charge.

I shall enter into no speculation respecting his intellectual powers, compared with those of men; but leave the foregoing account of his actions as a simple record of facts, that may be used by other observers to estimate the rank which he holds in the scale of sagacity. In the Appendix I have made a few observations on the histories given of the orang-outang by different writers.

After leaving Ascension, a favourable wind carried us rapidly to the end of our voyage. We made the Scilly Rocks on the afternoon of the 15th, and the several head-lands of the channel on the following day. Towards the evening the weather becoming hazy, and no pilot appearing, it was deemed unsafe to attempt reaching the anchorage at Spithead before the next morning. During the night the wind suddenly shifted two points, and blew fresh from the westward, and soon increased to a gale that shivered our mainsail and main-top sail, and carried away our mizen topsail yard. At daylight, we found ourselves about ten miles to windward of the Isle of Wight; and being soon after boarded by a pilot, we anchored by eight o'clock at Spithead, and by ten were safely landed on our native shores.

APPENDIX.

The Author trusts that the Table of the Contents of the Appendix in the next page will secure the Reader against any inconvenience arising from their not entirely coinciding with the references given in the text.

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APPENDIX.—A.

ADDITIONAL NOTES.

Page 19. — *Ipecacuanha Plants.*

Believing that I may tend to prevent the Ipecacuanha plant of the Brazils from being again confounded with the Ipecacuanha plant of New Spain, by contrasting their descriptions, I shall annex Brotero's description of the former plant, as contained in the 6th volume of the Linnæan Transactions, and a description of the latter formed from that of Mutis, as given by Linnæus in Supplem. Plant. p. 144.; and from one lately published by Humboldt and Bonpland in Plantes Equinoxiales. Livraison 16. p. 142.

Callicocca Ipecacuanha of Brotero: (Ipecacuanha Plant of the Brazils.)

Callicocca caule ascendente, suffruticoso, sarmentoso; foliis ovatis lanceolatis, inferne subpubescentibus, capitulo terminali, pedunculato; involucro tetraphyllo, foliolis subcordatis; corollis quinquefidis.

Radix perennis, simplex aut subramosa, subteres, sæpius perpendicularis, raro leviter obliqua; duas, tres, quatuorve uncias et ultra longa; supernè gracilior, crassitudine et similitudine caulis, sæpius hic illicve brevibus radiculis instructa (quarum una alterave interdum crassescit;) infernè duas tresve lineas crassa, vagè flexa, extus fusca, subannulata, annulis prominentibus, inæqualibus, subrugosis; sapore acri, amaro, odore vix ullo, nisi herbaceo. Dum sicca, cortex crassa, dura, fragilis, extus bruna, intus albicans, gomoso-resinosa, filo percursa lignosa, æquali, albo, ferè insipido,

mucilagineo, a quo facilè in plures annulos fissa contiguos et inæquales, fissuris lævibus, separatur; sapore primum farinaceo, postea subamaro, subacri, et semper minus acri quàm in statu viridi, seu vivo; odore vix ullo, sed cum mortario contunditur tenuis ejus pulvis subnaseoso nares odore afficit et usque ad sternutamentum stimulat.

Caulis suffruticosus, ex procumbente erectus, ad basin, qua procumbit, interdum repens, teres crassitudine pennæ gallinaceæ, quinque ad novem uncias altus, infernè glaber, efoliatus, fuscus, nodosus (uti a foliorum casu cicatrices,) internodiis sursum versus apicem indies decrescentibus, ibique villosus, viridis foliatus, in primis plantæ annis simplicissimus aut simplex, postea sarmentosus, sarmentis perpaucis efoliatis, subtortuosis procumbentibus, plus minusve dodrantalibus, nodosis, ad nodas vage radicantibus, ibique unicum alterumve novum caulem, a primo aut alio semipedem et ultra dissitum, producentibus.

Folia inferiora caduca, ita ut in planta florescentia 4, 6, aut 8 solum, rarissime plura, ad apicem caulis persistant; opposita patentia, ovato-lanceolata, nonnulla interdum ferè obovata, tres ad quatuor uncias longa, unam ad duas fere lata, integerrima; supernè saturata viridia, punctis scabriusculis aspersa, glabra, raro vagè subpubescentia, costâ parùm elevatâ, venis, lateralibus alternis, subparellelis, ad apicem curvatis: petiolus folii laminâ bevior, 2, 3 — ve lineas longus, canaliculatus, subvillosus.

Stipulæ geminæ, laterifoliæ, appressæ, sessiles sublineares, partito fimbriatæ, lacinulis subulatis, petiolis leviter adnatæ, illorum longitudine aut vix longiores, cum ipsis caulem subvaginantes, marcescentes.

Flores aggregati in capitulum solitarium, subnutans, caulem terminans, pedunculatum; pedunculo tereti, pubescenti, petiolis longiore, plus minusve semiunciam alto: flosculi sessiles, 15 ad 24 bracteolis distincti; bracteolæ involucri et flosculorum longitudini, pubescentes, integerrimæ, sessiles virides, formâ sæpe variantes, nunc subovatæ oblongiusculæ, nunc lanceolatæ obtusiusculæ, nunc (quod rarius) forma et magnitudine involucri foliolis similes, et tunc flosculi ipsis numerosiores.

Involucrum tetraphyllum; folioli subcordati, acuti, integerrimi, subsessiles, leviter undati, hirsuti; duo externi majores, omnes flosculis paulo longiores.

Cal. Perianthum membranaceum, albidum, brevissimum, quinque-dentatum, dentibus obtusis, superum, persistens.

Cor. Monopetala: tubus cylindraceus, longus, suprà parùm ampliatus,

pauce et extus lanuginosus; limbus tubo brevior, quinque-fidus, laciniis ovatis, acutis, recurvis.

Stam. Filamenta quinque, capillaria, brevia, supernè tubo inserta. Antheræ oblongæ, lineares, erectæ, exsertæ.

Pist. Ovatum, inferum, non angulatum. Stylus filiformis, longitudine tubi corollæ; margine nectarifero brevi ad basin cinctus. Stigmata duo, oblonga, crassicuscula, obtusa, antherarum longitudine.

Paric. Bacca unilocularis, disperma, ex ovali-subrotunda, nec sulcata, nec angulosa, sed lævis, calyce coronata, ex rubro purpurascens, mollis demum corrugata, nigricans. Quæ immaturæ decidunt siccanturque sunt ovales, utrinque (quà semina infernè planâ facie continguntur) unisulcatæ.

Semina duo, elliptica, lævia, leviter torta, arillo nullo; hinc plana, lineâ parùm elevatâ mediâ longitudinali notata, inde convexa, ad apicem unisulcata. Testa lignea, sordidè albida; integumentum internum membranaceum, tenuissimum, testa arcte adnatum: albumen testæ cavitati respondens, convexo planum, cartilagineum, durum ex fusco-fulvum, hinc ad faciem planam sulco longitudinali exaratum, inde læve; embryo dicotyledoneus, albumine brevior, erectus, dorsalis. — Linnean Transactions, vol. vi. p. 137.

Psychotria Emetica of Linnæus: (Ipecacuanha Plant of New Spain.)

Psychotria herbacea procumbens, foliis lanceolatis glabris, stipulis, extra foliaceis subulatis, capitulis axillaribus pedunculatis paucifloris.

Radix fusiformis; perpendicularis tereliuscula, ramosa, articulata insipida, emetica, radiculis filiformis instructa.

Caules fruticosi, simplices erecti, pedales, crassitiæ pennæ columbinæ, teretes; pilosi, pilis marcescentibus et in caule vetustione tomentum fuscescens referentibus.

Folia approximata, opposita patentissima, lanceolata aut oblonge acuminata, basi attenuata, supra glabra, subtus pilosiuscula, præcipue juniora, pilis marcescentibus et in vetustionibus evanescentibus, margine ciliato serrulata, venosa, venis infernè prominulis, nervo prominenti, viridia subtus pallidiora, petiolata, tres ad quatuor pollices longa, et unum ad unum et dimidium lata. Petiolus semiteres, canaliculatus, pilosus, tres lineas longus.

Stipula singula utrinque, extrafoliacea, brevissima, ovata, acuminata brevissime pilosa, horizontalis, decidua.

Flores albi, parvi, subsessiles in pedunculis axillaribus, subramosis teretibus pilosis, bi ad quinque vel octo flores, longitudine petiolorum.

Bracteola simplex ad singulum florem, vix manifesta.

Calyx parvus, quinque-dentatus, persistens pilosus.

Corolla monopetala, infundibuliformis. Tubus calyce longior cylindraceus sursum ampliatus. Faux villis mollibus subclausa. Limbus quinque-partitus: laciniis lanceolatis acutis introrsum rubescentibus subrevolutis tubo subæqualibus.

Stamina. Filamenta quinque, brevissima, fauci corollæ inserta. Antheræ parvæ, lineares erectæ apice pubescentes.

Pistillum. Germen inferum subrotundum. Stylus teretiusculus erectus longitudine tubi. Stigma crassiusculum bipartitum.

Pericarpium. Bacca cœrulea, subovata, lævis, calyce coronata, uniocularis. Semina duo, coalita, oblonga, utrinque acuta, introrsum plana, extrorsum gibba.

Page 24. — *Shark's Eye.*

The eye of the shark which I have mentioned in the text, was detached from the socket before it came into my possession, and did not enable me to obtain any very precise information respecting its very beautiful and complicated apparatus. Since sending that part of my work to the press, I have been presented with a preparation of a shark's eye, with most of its appendages, in spirit, by Mr. Radkin, the assistant surgeon of the Lyra, who never lost the opportunities afforded him by his commander of examining the structure of any singular or interesting animal taken on board the Lyra. He accompanied the preparation with the following notice of the organization of the shark's eye, and his permission to publish it in this Appendix. The *Squalus Carcharias* was the subject of Mr. Radkin's examination; and the following is his account of the structure of its visual organ: — "On dividing the skin around the eye, I found a great quantity of watery fat lining the socket, on removing which I obtained a view of the muscles of the eye. The most external, which from its use might be called *Levator Squammæ Oculi*, arises from the upper and back part of the skull near its junction with the vertebræ, takes a course downwards and forwards, passes over a small groove in the end of a jugular process, is retained in the groove by a ligament, and is inserted tendinous into a cartilaginous covering for the eye. Its use is to pull up this covering, situated as a lower eyelid.

THE GREAT SNAKE OF JAVA.

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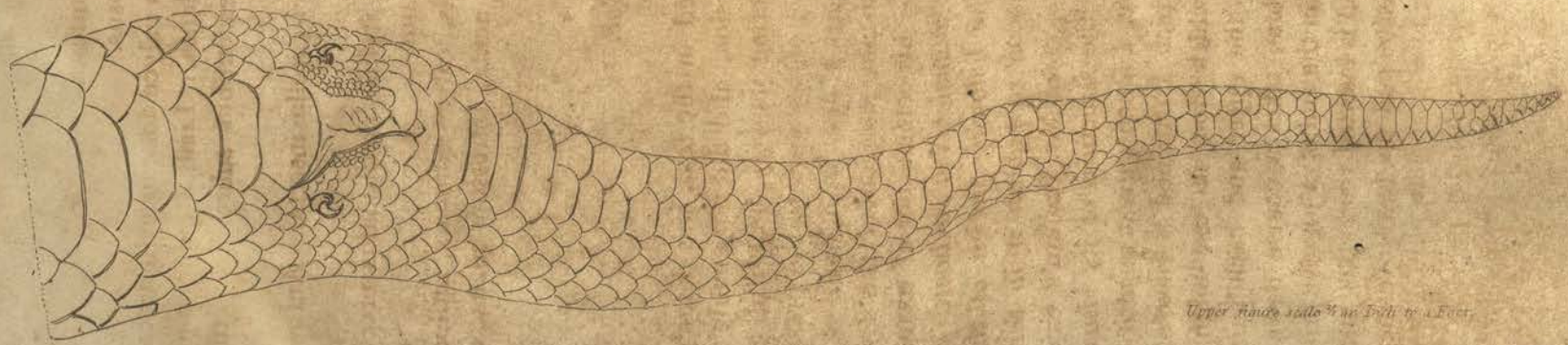
Sydenham Edwards del.t

Engraved by T. Fielding



Upper figure scale ¾ an Inch to a Foot.

Published by Longman Hurst Rees Orme & Brown London Oct. 1.1811

"The next muscles which appear are the anterior and posterior oblique, which require no particular description.

"The remaining muscles are four recti, which arise from and envelope a cartilaginous fulcrum, first to be described. A cylindrical, dense, cartilaginous body, about two inches long, and of the diameter of a crow's quill, arises from the bottom of the socket and passes straight to the centre of the ball. Its extremities, which are rounded, articulate with the socket and the sclerotica by cartilaginous cup-like cavities, and are confined to them by capsular ligaments. The recti muscles arise tendinous from the fulcrum close to its articulation with the orbit; from thence they diverge on all sides the fulcrum, and are inserted by broad tendinous expansions into the sclerotica.

"The optic nerve passes through the orbit full the fourth of an inch from the origin of the fulcrum, but converging unites with it on entering the sclerotica."

Such is Mr. Radkin's description of the structure of the eye of a shark recently dead.

On examining the eye, preserved in spirit, I find that its covering externally is of a fine scaly texture, resembling in all respects, excepting in the minuteness of the scales, the skin of the animal; interiorly it is lined with a delicate membrane, as fine and soft as that which lines the eyelids of any other animal. This organisation would seem to belong rather to an eyelid than a nictating membrane.

The straight muscles consist of two lateral, and one superior, and one inferior. They arise very distinctly from the cartilaginous stem; the superior and inferior at more than the fourth of an inch above its articulation with the socket. Each of the lateral, although also arising from it, send down, epecially the posterior one, a prolongation of tendon for insertion into the orbit. In the *sclerotica* they are inserted at equal distances around the globe of the eye, behind the transparent cornea. This disposition of the straight muscles of the shark's eye obviously prevents the cartilaginous body assisting their action as a lever so much as has been supposed.

The oblique muscles arise near each other in the anterior part of the orbit, the superior passing obliquely downwards, and the inferior obliquely upwards. Their office is to rotate the eye on its axis. In ordinary action, they probably affect only the articulation of the cartilaginous stem with the globe of the eye; but where the greatest extent of motion is requisite, they may

also affect its articulation with the socket. The cartilaginous stem, indeed, seems intended rather to give extent than power to the action of the muscles.

The optic nerve is admirably defended, by its position, from all pressure. It enters the orbit at the distance of more than the fourth of an inch from the cartilaginous stem, and passes into the globe of the eye in the angle formed between the inferior and anterior straight muscles: the action of these being in different directions, widens the angle through which it passes. At its communication with the orbit it is united to the stem by cellular substances.

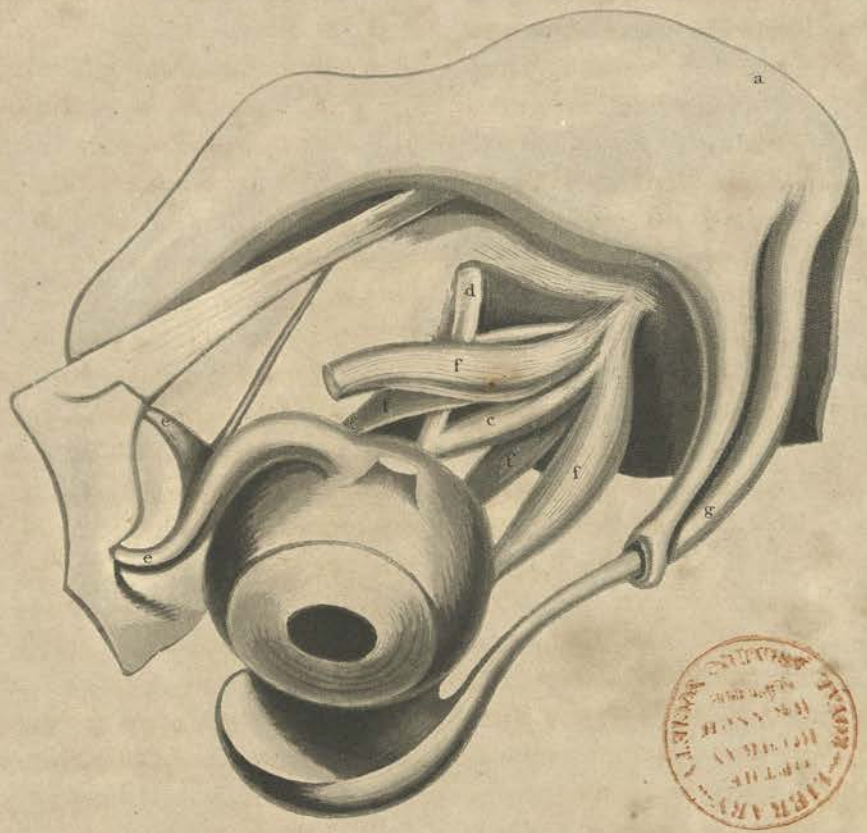
The annexed plate is taken from Mr. Radkin's preparation. The parts are shrunk by the action of the spirit, but their relative position is well shown.

Page 35. — *Nepenthes Distillatoria.*

This plant has received various appellations in the different countries where it grows. The Chinese call it the pig-basket plant, from the resemblance of its appendage to the wicker machine in which they carry pigs to market. According to Rumphius, it is sometimes called by the Malays the "pitcher plant," because its appendages resemble the vessels in which they collect water; and sometimes the "devil's pitchers," because they are found in uncultivated places supposed to be inhabited by fauns, or evil spirits of woods and mountains.

Nomen: Latine Cantharifera; Belgice Kannehenshruyd; Malaice *Daun Gindi,* Gindi enim cantharam denotat seu guttum, quo alicui aqua obfertur ad manus lavandas. Amboinice *Sobe Laybosso* et *Aytiba,* h. e. arbor excipuli, cum quo cantharas comparant. Portugalli illum vocant *Cannekas de Mato.* In Leytimora *Nitu Alaa,* h. e. diaboli ollula dicitur, quum in incultis crescit locis, quos fauni, h. e. sylvarum vel montium diaboli inhabitant, unde et quibusdam *Gindi Zeytang.* Quidam etiam hanc Malaice in Sumatra nominant *Gada Gada.* Herbarium Amboinense, tom. v. p. 123.

To the same author we owe an account of several superstitions held by the Malays respecting it. He states that the natives of Amboyna were unwilling to bring him specimens of the plant from the mountains, from the full persuasion that if the appendages were gathered and emptied of the water, heavy rain would overtake them before their return. In conformity with



SHARK'S EYE.

a. Part of the Orbit.
b. Covering to the Eye.
c. Cartilaginous Stem.
e.e. Oblique Muscles.
f.f.f.f. Straight Muscles.
g. Levator Muscle.
d. Optic Nerve.

Edwards del.

T. Fielding sculp.

London, Published for the Author by Longman, Hurst, Rees, Orme & Brown, July 1, 1818.

the same belief, when suffering from a long drought they pour the water from all the appendages they can find, satisfied that the ceremony will be followed by a change of weather. Such belief is curiously contrasted with their notions of the medicinal properties of the water contained in them, which they believe an infallible specific for incontinence of urine. "Quum pueri in cubilibus mejant, tum incola montes ascendit, ibique petit quasdam plenas nec apertas cantharas, quarum aquæ certam portionem puerorum capitibus superfundit certamque copiam epotandam ipsis exhibit, quam et etiam adultis propinant, incontinentia urinæ laborantibus." Rumphius in loc. cit.

Page 50.—*Great Snake of Java.*

I HAVE called this animal, of which I am now to attempt a further description, the great snake of Java, merely in reference to the locality of the individual specimen whose habits I have described in the text. There can be little doubt, I apprehend, that he might with equal propriety be designated the great snake of the Indian isles, the *Ular sawa*, or water-snake, of the Malays, the *Python amethiste* of Daudin, and *Pytho Javanicus* of Cuvier. The arrangement of the scales of the under part of the tail, accurately represented in the drawing, would seem decidedly to separate it from the Boa on the one hand and the Coluber on the other, and give it unequivocally to Daudin's genus of Pytho, which he has thus described in the Magasin Encyclopédique, tom. v, Année viii. "*Des plaques entières sous le corps et la queue, celle-ci muni aussi quelquefois de doubles plaques. Anus bordé d'écailles et muni de deux éperons ou ergots, par des crochets venimeux.*" But I fear the disposition of the scales under the tail will be found a very variable character; and that in some species, not otherwise distinguishable from the snake I am describing, the single plates will be found entirely wanting. In two specimens from the East Indies which I have lately seen at Exeter Change, agreeing with the snake that I have described in every other character, no single plates existed near the anus, and only three were to be found mingled with the double row which otherwise occupied the whole extent of the under part of the tail. Still, however, if any number of single scales constantly occur, they will keep the animal within the genus Pytho, as defined by Daudin, to which, in the present imperfect arrangement of serpents, it will be safest to refer it. It is obviously much more nearly allied to

the genus Coluber than that of Boa, as the variation in the arrangement of the plates, in the instances that I have mentioned, brought the individuals close to the former and removed them more widely from the latter. Whether the anatomy of other serpents answering to the genus *Pytho* separate them from the genus *Coluber* I know not; but I have been indebted to Sir Everard Home, who has examined one of the vertebræ of the Java snake, for the observation, that it differs from a vertebra of the Boa in wanting the process to which the constrictor muscles of the latter animal are attached, and which is shown in the figure of one of the vertebræ of a Boa Constrictor, in his Lectures on Comparative Anatomy. It will be found, however, from the specific description, to approach the Boa in the small scales on the back of the head, and in having its lips jagged.

As I am not aware that any particular set of characters are yet considered by naturalists as sufficient in themselves to form a specific description of serpents, I shall trust to a full detail of those which appear to me most likely to lead to identify it with others of its species.

Pytho Javanicus, or Great Snake of Java.

Gen. Char. vid. Daudin, Magasin Encyclopédique, tom. v.

Species.

Form—The shape may be compared to a double cone, tapering towards the head and tail, the greatest diameter of the body being its middle. The diminution of size is gradual to the anus; beyond it is rapid to the end of the tail. It is gradual to the end of the neck; beyond, the swelling of the head interrupts the gradation. The head is larger at its base than the neck. In shape it resembles a truncated cone, having its base at its union with the neck.

Colour—Greenish brown, with a purplish tinge, and yellow and black. Two brownish yellow bands arise from a point between the nostrils, near the margin of the upper lip, and diverging pass between the eyes, reach the back part of the head, where they divide each into two bands; the outer band on each side, after sending off a smaller one round the angle of the jaw, becomes of a lighter colour, and loses itself in the general yellow colour of the belly. The two inner bands traverse the whole extent of the back, communicating with each other by transverse bands, and sending out

on each side lateral branches which communicate together, and forming over the whole back a reticulated or chain-like appearance. The interstices thus formed are of different colours in different parts. On the back they are of a brownish green in the centre, and black in the margin. Their central colour becomes lighter as they approach the belly. The reticulations are also lighter near the belly, and have often an edging of brilliant yellow. The colour of the belly is bright yellow, passing into green on the sides, and is variegated with black spots. Black spots form two regular rows, one on each side, from the throat down to the anus; and are situated on the second row of scales, counting from the great plates on the centre of the belly. The head is strikingly marked. A narrow streak of yellow, edged by black, is situated on the back part of the head, between the divergence of the principal bands. A narrow yellow band passes directly downwards from the eye to the mouth, and forms an angle with another which passes from the posterior corner of the eye to the angle of the jaw.

Scales—Flat; on the back and throat disseminated; on the belly imbricated. The scales of the back are oval and flat, and do not overlay each other till they approach the belly. On the hind part of the head they are smaller than in other parts of the body; over the nose they are broader and of irregular forms, resembling in their disposition the articulations of the flat bones of the head; on the margin of the upper lip they are broad and oblong, casing the lip in a regular order. The scales of the under part of the body are variously disposed. From the margin of the lower lip to some distance beyond the angle of the lower jaw they are loosely disseminated, and under the mouth are divided by a narrow expansible membrane. They arise from scales edging the lower lip, and having their ends free, give a jagged appearance to the mouth. The scales of the throat increase in size till they terminate in the great plates passing along the belly to the anus. These are broad, oblong, flat, rounded on the angles of their free edges, and are arranged in a single imbricated row. Laterally they imbricate with a row of very broad scales following their whole extent; these in like manner imbricate with a second row of broad scales, which gradually pass into those of the back: it might perhaps be said that three rows of plates occupy the whole extent of the belly, but the lateral rows differ from the central in being oval on their free edges.

The scales of the tail are arranged in the following order:

Five pair of broad plates, similar to those of the belly.

Forty-three pair of smaller plates.

Seven single plates.
Five pair of small plates.
Three single plates.

The tip of the tail is covered with very small scales closely imbricated. The anal orifice is guarded on the sides by very small scales intimately clasping each other. Towards the belly the central broad plate somewhat overlays the orifice; toward the tail a broad scale on each side closes it by the meeting of their internal edges, which are free. The angle formed between their convex ends is filled up by a small oval plate.

Claws—strong curved; one on each side the anus. These claws spring from prominent cartilaginous cushions.

Observation.—I have examined the claws of some other species of snake exhibiting about town, from the East Indies, and have always found them straight. The drawing which is given in the text having been taken from the skin of the animal after it had been for some time preserved in spirit, the membranous parts appear relaxed, and the anal orifice open.

Pages 67, 68.—*Temperature of the Sea.*

The general conclusion to be inferred from the experiments stated in the text is the same which is deducible from the greater number of those made by other observers. And although these experiments have not been so numerous as the importance of the subject merits, they have been made by Forster and Irving, in the highest southern and northern latitudes, reached in the voyages of Cook and of Phipps; and by Péron and others, at the equator and intermediate seas. These experiments, as far as they regard the temperate and torrid zones, have uniformly shown that the "temperature of the sea diminishes in proportion to its depth." But this deduction does not invariably follow, from the experiments of Forster and Irving in high latitudes; especially when the temperature of the water at the surface closely approaches the freezing point.

The two experiments of Forster to which I allude* are the following: On the 15th of December, 1772, being in latitude 55° south, this observer sent down an apparatus, for ascertaining the temperature of the sea, to the depth of 100 fathoms, Fahrenheit's thermometer in the air standing at 30½°, the

* Forster's Observations.

temperature of the surface being 30°. The instrument having remained at the given depth seventeen minutes, and having been drawn up in five minutes and a half, the inclosed thermometer marked 34°; the temperature of the sea at the depth of 100 fathoms being four degrees higher than at the surface. On December the 23d he repeated the experiment at the same depth, the temperature of the air being 33°, of the surface 32°, the instrument having remained down sixteen minutes and been withdrawn in six and a half, gave a temperature of 34½°; in this instance the temperature of the sea at the given depth was 2½° higher than at the surface. The experiment of Irving* is no less at variance with the result of experiments made when the surface has been of a comparatively high temperature; and his experiment is the more interesting, as his instrument descended below the ice. On August the 4th, 1773, when in 80° 30′ N. lat., he sent down an apparatus to the depth of sixty fathoms, the temperature of the air being 32°, of the surface 36°, and the instrument being drawn up the inclosed thermometer stood at 39°, the temperature at the given depth being 3° higher than that of the surface.

These facts show the necessity of further experiments before we can frame a due expression of the law regarding the temperature of the sea at different depths. Observations in various latitudes and various depths must be greatly multiplied before it will admit of precise definition. In the present state of information on the subject it may perhaps be legitimate to conclude, that the temperature of the sea in all latitudes diminishes in proportion to its depth within some limit, when the temperature of its surface is much above the freezing point.

I may venture in this place to remark, that the greater temperature of the sea near the poles, at considerable depths, than at the surface, favours the opinion of the bottom of the ocean being constantly at a uniform temperature. What this temperature may be we do not possess sufficient data to determine; but it is not perhaps unreasonable to conjecture (leaving the theory of a central fire out of consideration) that it is at that point where the water has the greatest density, a point known to be above that of freezing.

The zealous naturalist of the French expedition to Terra Australis, in endeavouring to establish his favourite propositions, that the temperature

* Phipps's Voyage.

of the sea in all latitudes diminishes in proportion to its depth, and has no other limit than the eternal congelation of the bottom of the ocean, "*la congelation éternelle de ces abîmes,*" has endeavoured to explain away the consequences of Forster's experiments. "*Si* (he observes) *l'on fait attention que ces expériences ont été faites au milieu de l'été de ces regions, c'est à dire au mois Decembre, on concevra sans peine que les montagnes de glace qui se resolvoient de toute part devoient entretenir à la surface la basse température observée par Forster; tandisqu' à des profondeurs plus considerables, la fusion des glaces n'ayant pas lieu, la chaleur que les rayons du soleil pouvoient y faire descendre devoit s'y maintenir momentanément plus grande.*" This explanation appears scarcely admissible, because, in the next experiment stated in Forster's table, and made in a much higher latitude, and equally or more amidst the ice, no such comparative cooling occurred; for in this experiment, in lat. 64°, the surface was 33½°, and at the given depth 32°; and because in the first of the two experiments to which he alludes, the air was two degrees below the freezing point, and would not therefore admit the melting of the ice. Still less would this explanation do away the objectionable result of Irving's experiment made in 80° north, from which it appears that below the ice the temperature was found to be at 39°, or 7° above the freezing point, that of the surface being 36°. With equal inconsistency of argument and candour of statement, the author, in reasoning upon Irving's experiments has overlooked this result entirely, and drawn from them the same conclusion that he had before done from others, that the temperature is *constamment plus foible au fond qu' à la surface de la mer;* but has in perfect fairness given, in his valuable table of experiments by different observers, as well the facts which oppose, as favour his opinions.*

With regard to the hypothesis of the same author, that the bottom of the ocean is a body of ice, the following objection of Professor Horner, the astronomer to Krusenstern's expedition, seems almost unanswerable: "The saltness of the sea is inconsistent with the idea of ground ice. As water cannot freeze while any foreign matter is mixed with it, the fresh water must first separate from its saline contents: but at the instant of its separation, before it becomes ice, it must ascend by its greater specific lightness into higher and warmer strata; so that ice can never form in the depth of the sea."

* Vide Voyage aux Terres Australes, tom. ii.

I cannot dismiss this subject without noticing a magnificent experiment of Captain Wauchope's, of His Majesty's ship Eurydice, and which I hope will be given more circumstantially to the public by that gentleman, together with others which have a peculiar value from the caution of the observer, the completeness of his apparatus, and the unparalleled depth to which it descended. When within a few degrees of the equator, during a calm, this gentleman put his apparatus overboard, and allowed it to descend till it had carried out 1400 fathoms of line; but estimated the perpendicular depth at 1000 fathoms. The temperature of the surface was at 78° of Fahrenheit. On drawing up the instrument, he found the inclosed thermometer marking 42°; a difference of temperature between the surface and given depth of 31°.

Page 58. — *List of the Persons composing the Embassy when it left England.*

Right Hon. Lord Amherst,	Ambassador Extraordinary and Minister Plenipotentiary.
Hon. Mr. Amherst,	Page to the Ambassador.
Henry Ellis, Esq.	Public Secretary to the Embassy, and eventually Third Member of the Commission; also furnished with plenipotentiary powers to act in the event of the Ambassador's death.
Henry Hayne, Esq.	Private Secretary to the Ambassador, and eventually Acting Secretary to the Embassy.
Rev. John Griffith,	Chaplain.
Clarke Abel, Esq.	Surgeon to the Embassy.
Dr. James Lynn,	
William Havell, Esq.	Artist.
Lieut. J. Cook,	Commander of the Ambassador's Guard.
Mr. James Marriage,	Superintendant of Presents, &c.
Mr. Zachariah Poole,	Assistant to Mr. Abel.
Hon. Mr. Abbot, Mr. T. B. Martin,	Midshipmen of the Alceste.
Lieut. Charles Somerset,	Joined the Embassy at the Cape of Good Hope, and was attached to the Guard.

List of the Persons who joined the Embassy after its arrival in the China Seas.

Sir George Staunton, Bart.	Second Member of the Commission.
Hastings Trone, Esq.	Chinese Secretaries and Interpreters.
J. F. Davis, Esq.	
Thomas Manning, Esq.	
Rev. Robert Morrison,	
Alexander Peirson, Esq.	Surgeon to the British Factory at Canton.

Servants, Band, and Guard; — in all 72 persons.

Page 58. — *Tidings of the Embassy favourably received by the Chinese Government.*

Since sending the first part of this work to the press I have been indebted to Mr. Morrison's Journal for the following account of the ceremony of delivering the Earl of Buckinghamshire's letter, which announced the coming of the Embassy to the local government of Canton.

"The British government, in conjunction with the Hon. the Court of Directors of the East India Company, deeming it expedient to send an Embassy to China, Earl Buckinghamshire, President of the Board of Controul, wrote to the Viceroy of Canton, to announce the intention of His Royal Highness the Prince Regent.

"His Lordship's letter arrived in the close of May 1816. Sir George Staunton, President of the Select Committee, wrote from Macao to inform the local government, and to request a proper conveyance to Canton in order to present the letter.

"Sir Theophilus Metcalfe, a member of the Committee, Capt. Clavell of H. M. ship Orlando, Mr. Morrison, who then acted as Translator and Secretary for the Chinese department to the Select Committee, and Mr. Daniell, a member of the Company's establishment in China, proceeded to Canton, and requested an audience of the Fooyuen*, (the Viceroy then being at Court,) which was accordingly fixed to be on the 4th of June, the day after our arrival in Canton.

"We proceeded in chairs to the office of the Fooyuen, at the gate of which we alighted, and were led on the left side of the great hall into an apartment, in which the principal Hong merchants were waiting to receive us, and give us tea. We had sat about ten minutes, during which time it was negotiated, whether Sir Theophilus should give the letter into the Fooyuen's hand, or pass it through another person. Sir Theophilus insisted on the first, which was granted. At a signal given, the doors of the hall were thrown open, a shout raised by the attendants, and a salute of three guns fired. The Tartar general, called Tseang-Keunyous, was present on the occasion, with a detachment of troops, forming a path up to the hall. The imperial Commissioner for foreign trade, called the Hoo-poo, (or Hoppo,) was also

* *Fooyuen* is the second officer in a province: he acts for the Viceroy in his absence.

there. Our party was then requested to proceed with the letter, which, contained in a box, was carried in form by Mr. Morrison. We walked up to the higher end of the hall, made a bow, and put on our hats again, as it was inconvenient to stand with them in the hand. After which, Sir Theophilus Metcalfe opened the box and gave the letter into the Fooyuen's hand. He received it, rose and asked if our aged king was well, and how the Prince Regent did, spoke of the former embassy with satisfaction, and then gave the letter into the hands of an attendant officer. On this we withdrew, returned to the door of the room we had left, and prepared to leave the the palace. Puankhequa, an old and active Hong merchant, who managed the announcing of the last embassy, desired us to wait till some questions should be put by the Fooyuen.

"Sir Theophilus, however, thought that these had better be sent to the Factory, as more respectful on the part of the Chinese, and also as affording more time to give suitable answers. Old Puankhequa pressed our stay in vain, then sighing said, "Mei-yeu-fă" — "There is no help for it."

"Sir Theophilus remained at Canton several days, during which time various questions were brought from the government, as, What number of ships were coming? What the Ambassador's name was? What the presents were? Whether the ships would come to Macao or not? What nations of Europe had been at war? What age the Prince Regent was? When the reins of government were given to him? &c. &c.

"In a day or two the government sent out to require that Capt. Clavell whom Puankhequa had untruly represented as the bearer of Earl Buckinghamshire's letter, should remain till an answer was received from court. A document was found on record, proving that the Hong merchants had, when Lord Macartney's embassy was announced, given a bond to government, promising that the gentleman who brought the dispatches there would remain for a reply from court. Capt. Clavell would make no such promise, as the letter, in fact, was not brought by him, and he purposed to leave before an answer could arrive. Sir Theophilus gave a written paper, saying that he would remain; but the government would not be satisfied with it, but required the Hong merchants to promise in behalf of Capt. Clavell. The Hong merchants declined. They were taken to the Kwang-chow Foo's office, and detained a day or two; when finally, they came to an understanding, by giving the bond required, and obtaining an assurance from the government that the promise given in the bond, should not be exacted of them.

"This affair being arranged, Sir T. Metcalfe and the gentlemen who accompanied him returned to Macao."

"Europeans and Chinese had various opinions respecting the reception of the Embassy. Some of the first, who had means of knowing a little of the temper of the court, affirmed that the embassy would not be allowed to land; and Chinese of respectable standing in society, were persuaded that it would certainly not be received by the way of Tëen-tsin, but would be required to go by the way of Canton; and if it did go so far as Tëen-tsin, it would have to return and land at Canton."

Page 69.—*Visit of Mr. Morrison to the Legate, on his Arrival at Ta-koo.*

The following account by Mr. Morrison, of his reception by the Legate, being an illustration of national manners, and of the light in which the Chinese ministers held some of the officers of the Embassy, I have thought its insertion in this place would be acceptable to my readers: —

"The passage into the Pei-ho is exceedingly shallow; in some places not more than two feet. Ta-koo, a poor village, is situated a mile or two from the entrance. In a temple at this place, the Legate had taken up his abode. It rained when we reached the beach, and we had to wait till we were announced. The officer with us was civil, in endeavouring to keep us from the rain. In a short time carriages, or covered single-horse carts, were brought to the beach; we got into them, and drove off, about a quarter of a mile, through a very dirty road, to the temple; all around was a flat, marshy, unproductive, gloomy region. We entered an inner room in the temple, and were required to send in our names, and what we were, to the still inner apartment where the Legate was. On being ushered in, we stepped over the threshold, walked up, and made our bow.

"On looking round there were no chairs to receive us, but without-side the threshold were placed three chairs. We went to conciliate, and therefore, though we felt the haughty reception intended, took no notice of it, but sat down.*

* "In Chinese apartments, there is placed at the head of the room, a large broad couch, called a kang. In the middle of it stands a table, about eighteen inches high, intended to rest the arm on, or to place tea on. On each side of this two persons sit. The left is the place of honour. From the ends of the couch, at right angles, are placed two rows of chairs; the rank diminishes as they recede from the couch. The first in the left side-row is the highest place. To prevent persons taking a place they do not wish them, they sometimes remove the chairs, as was the case in the present instance. There were no chairs at the head of the right-hand row, but three placed, as I have already observed, without-side the threshold."

"The Legate sat on the right-hand end of the couch, leaving the chief place empty for his absent colleague. At the upper end of the left row of chairs, the commander of the district, with a red button in his cap, sat. Next to him, Yin, a military officer (Hëĕ-tŭe), with a red button, and Chang, a civil officer (Tuon-tuè), of Tëen-tsin, with a blue button. These two persons were to attend upon the accommodation and safe conduct of the Embassy, under the Legate and Viceroy. These two gentlemen properly bore the title of Ta-laou-yay, 'Great venerable Father;' but in their intercourse with foreigners were called by their domestics Ta-jin, 'Great Men.' The Legate and Yin were Tartars; Chang was a Chinese; Kwang, the Legate, was a little man, about fifty-eight years of age, pleasant and conversible in his manner, but artful and fraudulent; seeking to obtain his purpose rather by negative than positive acts; withdrawing the means of comfort, rather than by inflicting what was disagreeable; close-minded, specious, and clever. Yin was of low stature and ruddy complexion, and good-natured, with a little of the feudal pride of the Tartar, and ignorant as Tartar Chinese military men generally are. Chang was rather old, tall, thin, and emaciated, it is to be apprehended, by the use of opium and debauchery. The commander of the troops at Ta-koo, was not seen frequently enough to form an opinion of his character.

"In the presence of this assembly, the Legate began in a distinct and cheerful tone, to inquire the distance we had come; whether we had touched at Macao? how long we had come from thence? whether we had met the vessels he had sent to meet us? (he had never sent any;) the number of ships? of men in the ships? of persons in the Embassy? and so on; to which he received such answers as truth and prudence suggested. The other gentlemen joined the Legate in expressing their satisfaction.

"He hinted, that instead of seventy-five persons, fifty would be enough; to which it was replied, that to China, twenty or thirty, more or less, could be of very little consequence; that to do the thing liberally would be handsome. He received the suggestion, and we heard no more of the objection till it was too late to alter it. He said that Chang and Yin would the next day go on board our ships to wait on the Ambassador and the Commissioners.

"After this we withdrew, and had a dinner in the Chinese manner with the inferior officers who had been on board. In the temple there was an upper story, from which we had a view of the surrounding country, and of the ships in the roads. Their masts only were visible. An officer entered

into conversation with Mr. Morrison, and informed him, that he understood the Embassy would not remain at Court so long as the last one did: that His Imperial Majesty was going to Jĕ-ho, in Tartary, and did not mean to take the Embassy thither. We heard that the Viceroy, Na-yen-ching, who had been ordered to attend to the Embassy, was since disgraced, and cast into prison.

"We went into one of the priest's rooms to take tea, and found hanging against the wall, as idol pictures do, an European print of the head of Jesus Christ, crowned with thorns, and a reed in his hand. Around, on the Chinese paper, in the centre of which it was pasted, were Chinese characters. When requested to take it down the priest declined, saying that it was dedicated, and he could not take it down; but he showed to Mr. Morrison a service, in mysterious Chinese phraseology, which was read when the picture was worshipped. We remained at the Temple all night, lodged upon benches covered with mats, without any bedding whatever; not even a pillow for our heads. Lieutenant Cooke and Captain Crawfurd being inured to bear fatigue, did not regard it: Mr. Morrison, from the want of rest, and a rough passage back to the ships next morning, was much indisposed for two or three days. The Legate intended to have given us some presents in the morning, but our rough lodging induced us to hasten our departure very early. The Chinese afterwards made an apology for treating us so ill."

Page 69. — *Cards of Compliment received from Chang and Yin.*

These cards of red paper, in several folds, were about eighteen inches in length when folded. "In the middle of the page," Mr. Morrison has observed, "was written their names and rank, beginning with Teen-chaon, 'Of the celestial empire.' This style of card is commonly affected in their intercourse with foreigners. Amongst themselves they write on much smaller cards their name, prefacing it with Yu-te, 'your simple younger brother,' or some other expression of humility, and closing it with sun-show-pae, 'bows his head, and worships.'"

Page 73. — *Flags inscribed with the large Chinese Characters Koong-tsu, or Tribute-bearers; or more properly, according to Mr. Morrison, Kung-she, or Envoys with Tribute.*

In the document transmitted from the Ambassador, through Mr. Morrison, to the Chinese government, the Ambassador and Commissioners were styled Wang-chæ, "Royal Envoys," and the presents Le-wŭh, "Things given from

courtesy." The Chinese wish to call foreign ambassadors Kung-she, "Envoys with tribute," and the presents Kung-wŭh, "Articles of tribute." That the word *kung* has long been understood as here stated, appears by the following quotation:— "Kœo-tsong, of the Lung dynasty, made peace with the Tartar King Hi-tsong, on very dishonourable conditions; for on signing this treaty he made use of the word *chin*, which signifies subject, and of *cong*, which is tributary." — Du Halde. It may occur to the reader, that the Chinese give presents in return; this is true, but they call them by a very different name, viz. Shang, "a thing bestowed on an inferior." The letters which have passed between European Sovereigns and Chinese Emperors have not been called by the same name. The letters which they receive, they wish to be called Pea-su-wan, "a representation made," as if by petition. The letters they give are called Chĭh, "an imperial mandate." We used the word Shoo, "a book, or letter," such as passes between equals. The Chinese allowed us our own phraseology, and in speaking to us generally used it; what they wrote on the flags of boats, or used amongst themselves, we could not controul."

Page 76. — *Trackers of the Boats of the Embassy.*

The following observations, extracted from Mr. Morrison's journal, respecting the trackers employed in China, have so much interest as to require no apology to my reader for their insertion in this place: —

"The boats were dragged by human effort. Poor miserable looking men passed cords across their breast, over one shoulder and under the other arm, and walked forward in a leaning posture, pulling at the end of the rope, which had its other end fastened to the mast-head of the vessel, to which they were giving motion. There are sometimes ten, twenty, or thirty men employed to drag one boat. These men thus engaged are called Tsëen-foo. Where there are not persons whose constant occupation is tracking, or where an extraordinary number is required, government impresses poor people, wherever they find them, for one day's journey; and to have them ready on the arrival of a fleet, sometimes confines them for a day or a night. At one place we found a temple, dedicated to the Ming-keen-shĕh-wang, 'ten judges in Hades,' converted into a prison, to confine the trackers over-night. Four of our party went to see the temple, but found its gate chained up, and the magistrate of the town's seal upon it. A military officer used his influence to have it opened for us, but the large group of imprisoned trackers

had so manured the courts of the temple during the night, it was with great difficulty we could find an uncovered spot to tread on, or beat the strong effluvia which exhaled from the rich deposit.

The trackers have a song which they call tseen-foo-ko, which they chaunt to inspirit them, and give unison to their efforts. The greater part of it is merely the tone of exertion, interspersed with a few expressions, alluding to the country they are passing, and the place to which they look as the end of their toils. One person repeats the sentences, which have meaning, and the whole join in a chorus, hei-o, Wo-to-hei-o, the import of which appears to be, 'pull away, let us pull away.' Mr. Morrison requested a man to write down a tracker's song and it closed by holding out the hope of a breakfast when they reached Tëen-tsin."

Page 83. — *Ceremony of Prostration.*

The ceremony performed by the Chinese at Tien-sing, and required by them of the British Ambassador, was the san-kwei-kew-kow, or the kotow, nine times repeated. The following notice respecting the forms of respect at present observed in China, is taken from Mr. Morrison's journal: —

"The lowest form by which respect is shown in China, at this day, is kung-show, that is, joining both hands, and raising them before the breast. The next is tsŏ-yĕh, that is, bowing low with the hands joined. The third is ta-tseen, bending the knee, as if about to kneel. The fourth is kwei, to kneel. The fifth ko-tow, kneeling and striking the head against the ground. The sixth sam-kow, striking the head three times against the earth before rising from one's knees. The seventh lŭl-kow, that is, kneeling and striking the forehead three times, rising on the feet, kneeling down again, and striking the head again three times against the earth. The climax is closed by the san-kwei-kew-kow, kneeling three different times, and at each time knocking the head thrice against the ground.

"Some of the gods of China are entitled only to the sam-kow, others to the lŭl-kow; the Tien (Heaven) and the Emperor, are worshipped by the san-kwei-kew-kow."

Page 95.—*Visit of the Ambassador to the Imperial Commissioners, at Tung-chow.*

The following interesting account of the interview of Lord Amherst with the imperial commissioners, is from the pen of Mr. Morrison: —

"The party finally arrived at the Heo-yuen, or Literary Hall, of Tung

Chow. There was no antichamber in which a person could sit down, and the Ambassador had to stand a few minutes till our arrival was announced. Four persons were invited into the room in which the Duke was. Its being small was assigned as a reason for more not going in. Mr. Amherst bore his father's train.

"The Che-chou, or magistrate of the town, was in waiting. He was a person who at first professed to be very civil, but who, from the trouble the public service had given him, soon changed his tone and manner; and his eyes, which at no times looked straight before him, for he squinted much, indicated the utmost aversion. He said that szeko-jin, 'four men,' were to go in. Old Chang, who was also of the party, corrected him, and said sye-wei, 'four gentlemen.'

"A small court-yard, not defended from the rain, was to be crossed by the aid of umbrellas. This was effected; and a bamboo hanging screen being raised, discovered the Duke, Mŭh and Kwang, standing about three or four feet from the door, with their faces towards it. The Ambassador made an inclination of the head, which the Duke did not return in any way, but began, in a loud stern tone, 'We are especially sent here by the great Emperor, to see the ceremony properly performed.' Mr. Morrison said, 'Let the Ambassador be seated, and then converse.' The Duke replied, his lip quivering with anger, 'We stand, let him stand.' This was explained to the Ambassador, who said, 'Very well, we'll stand.' The Duke was then desired to resume what he was about to say. He began: 'Teen woo leang jĭh. To woo ush kwang, As in heaven there are not two suns, so on earth there are not two sovereigns. The great Emperor is Teen Lize, the son of Heaven; before him all Kings should bow down. You know it;' (looking at Mr. Morrison, who had been seen reading Confucius, and which had reached the Duke's ears). The ceremony insisted on was coeval with Hae-kwo, (the commencement of the dynasty). Feeling this to be no great length of time, he added: 'It has existed from the highest antiquity, and Kang-kae-puh-tĭh cannot be altered. Without the performance of this ceremony the Ambassador and his tribute will be forthwith rejected and cast out,' throwing his hand from him as he pronounced the last words.

"The Ambassador, instead of yielding to the impulse of feelings such as this speech was calculated to produce, took no notice of the Duke's rhodomontade; but with self-command, and a firm tone, said, that he considered the Emperor of China as one of the greatest Sovereigns in the world, and from His Royal Highness the Prince Regent also considering him in the same

point of view, he had sent him to compliment His Imperial Majesty. The ceremony which he proposed to perform was the same as performed by the last British Ambassador, Lord Macartney, which was graciously received by the late Emperor.

"The Duke's face put on a smile at the first part of this speech, and he took a purse from his side, and gave it to Mr. Amherst; but when he heard the close, he replied with warmth, 'The affairs of the last embassy were its own affairs. Those of the present embassy alone are what we will converse about.' He turned to Chang, who was standing by, and said, 'Do you lead them out, and explain fully what I have said, and the reasons of it.' The Ambassador being informed of this, saw plainly that nothing was to be done with the Duke then, and he would not submit to be referred to a person of Chang's rank to discuss the subject. He therefore asked the Duke if he might expect to see him again. The Duke supposed that the Ambassador considered the meeting as partaking of the nature of a visit, and said, 'This is not a visit, it is an official meeting on national affairs.' He was told that the Ambassador considered it as such. He then said, 'Whether you see me again or not, depends on the resolution you choose to come to.' On hearing this, the Ambassador took the memorial from his pocket, and presented it to the Duke, saying, 'I'll trouble you to transmit that to His Imperial Majesty.'

"The Duke, evidently disconcerted at such an unexpected occurrence, took it, looked at the address, turned it over, passed it to Mŭh, and said, 'it is sealed.' The Duke was taken down a peg or two by this reference to his master, and walked forward a few steps to see the Ambassador out. The whole party immediately returned to the Ambassador's house."

Page 112.—*Sceptre sent from the Emperor of China to His Royal Highness the Prince Regent.*

This sceptre, cut, as stated in the text, from the stone called Yu by the Chinese, was valued at £500. Its name in Chinese is Yoo-ee, signifying, "May it befal you agreeably to your wishes!"

Page 147.—*Notices respecting Mahomedans and Jews.*

[FROM MR. MORRISON'S JOURNAL.]

" Mahomedans were found in every part of our journey. They frequently hold situations in the government.

" On the evening of September 10th, whilst walking on shore at a village called Too-leaou, about fifty miles from Tëen-tsin, I observed written on the lantern of a poor huckster's shop, Hwung-hwing-loou-teen, ' An old Mahomedan shop.' On stopping to ask the owner, who was an old man, whence he came, he replied, ' from Seyang,' ' the Western Ocean.' When urged to say from what country of the West, he said he did not know. He understood his family had been in the place he now was for five generations.

" He informed me there were many Mahomedans in the neighbourhood; they had a Le-pae-sze, ' Temple for Worship.' They observed every third and seventh day; chiefly the seventh. They used for the Chinese word Tëen, ' Heaven,' the word Choo, ' Lord or Sovereign.' The old man could not read: he did not cease to sell commodities on the Sabbath.

" October 13th. At a temple of Fŭh, near Kwa-chow, I met with a gentleman who held a situation under government. On entering into conversation with him, it appeared that he was a Mahomedan.

" He said, he understood that the Mahomedans came over to China during the dynasty Tang, about twelve hundred years ago.

" In Chinese the Mahomedans express the deity by Choo, ' Lord,' and not by Shin, ' a God, or Spirit;' because he said the Gods (Shin) were included in things created. ' We,' said he, ' venerate the Lord, who is the true Lord of what exists, and what does not; the Creator of all things, He is not like any thing; not to be compared to any thing; the one only true Lord.' He called the Sabbath by the name ' Choo-ma-ush.'

" He informed me that at Kae-fung-foo, in Honan province, there were a few families denoted Teaou-kin-keaou, ' the plucking sinew sect,' because they take the sinews from all the flesh which they eat. They also had a Le-pae-sye, or Temple of Worship. They observed the *eighth* day as a Sabbath. He regarded them the same as the Teen-choo-keau, which is the name by which the Christians are known in China.

" The above statement exactly corresponds with what is related in Grosier, on the authority of a Romish missionary. That person saw and conversed with the people of whom he spake, and he considered them as *Jews*.

" The gentleman felt a little unwilling to converse on the subject of religion; said it was not their custom to do it; but to satisfy the curiosity of a stranger, and as I had been civil to his brother, he now did so. The priest of Buddah was sitting by and handing tea all the time."

In addition to the notices contained in the above quotation respecting the Mahomedans and Jews, I may add the following from different authorities.

According to the author of the essay entitled, " Idée Générale de la Chine," contained in the fifth volume of the " Mémoires concernant les Chinois," Mahometanism was introduced into China by the Tartars. " Cette religion s'introduisit à la Chine par les Tartares qui en faisoient profession. La première époque de son établissement est donc sous le règne de Genghiskan; et celle de sa destruction, lorsque la dynastie Chinoise des Ming remonta sur le trône et chassa les Tartares occidentaux de cet empire." The author in this passage appears to mean the destruction of Mahometanism as an established religion, for he immediately adds, " Les Mahometans sont tolérés à la Chine, parce qu'ils sont fort tranquilles, qu'ils ne disputent point, et qu'ils ne se donnent aucun mouvement pour répandre leur doctrine. On n'en compte que 5 à 6000 familles, gens de basse condition, et auxquels on fait très-peu d'attention." This last statement, as far as it regards their numbers and poverty, is in some degree contradicted by a letter from a missionary, written at Pekin in the year 1721, although it states that they were then held in great contempt by the Chinese. " La secte des Mahométans s'étend de plus en plus; ils se soutiennent principalement par le grand commerce qu'ils font dans les provinces, et par les sommes d'argent qu'ils donnent libéralement aux Mandarins, car ils sont fort riches. Mais du reste les Chinois ont pour eux le plus grand mépris." Lettres Edifiantes et Curieuses, tom. xix. p. 140.

Du Halde remarks, " Au delà du Hoang-ho, on trouve sur le Canal quelques villes, que les Mahometans ont tâché de rendre marchandes, en y attirant le commerce; mais ils n'y ont pas réussi. Leurs mosquées sont fort élevées, et la structure n'est nullement du goût Chinois. Après une si longue suite de générations, ils ne laissent pas d'être regardez comme des gens, dont l'origine est étrangère; et de tems en tems on leur fait des insultes." Du Halde, folio, tom. i. p. 133.

Grosier has the following passage: " The Mahometans have multiplied much more in China than the Jews. It is above six hundred years since they first entered this empire, in which they have formed different esta-

blishments. For a great number of years they were preserved only by marriages, and by the alliances which they contracted; but for some time past, they seem to have been more particularly attentive to the care of extending their sect, and propagating their doctrine. The principal means which they employ for this purpose are, to purchase for a sum of money a great number of children brought up in idolatry, whom their poor parents, compelled by necessity, readily part with. These they circumcise, and afterwards educate and instruct in the principles of their religion. During the time of a terrible famine which desolated the province of Chang-tong, they purchased more than ten thousand of these children, for whom when grown up they procured wives, and built houses, and they even formed whole villages of them. They insensibly increased, and are now become so numerous, that they entirely exclude from those places in which they reside, every inhabitant who does not believe in their prophet, and frequent a mosque. Grosier's Description of China, Transl. 8vo. vol. ii. p. 270, 271.

Grosier's account of the Jews alluded to by Mr. Morrison, is entirely taken from a letter written from Caisong-fou, the capital of Honan, by Father Gozani, a Portuguese missionary, in November 1704. * This letter, and information derived from other missionaries who had conversed with Jews in China or visited them, have afforded materials for an interesting memoir on the Jews in China, published in the 18th volume of the Lettres Edifiantes. From all the authentic evidence adduced, it appears that a Jewish colony first appeared in China in the reign of Hang-ming-ti, of the dynasty Han, which began about the year 206 A.C. †, and that they came from Si-yu or the western country. This country is supposed by the author of the memoir to be Persia, as the Jews of Cai-song-fou have still many Persian words in their language. They are called by the Chinese Hoai-hoai, an appellation common to them and the Mahometans; but call themselves Tiao-kin-kiao, "the law of those who pluck out the sinews," because they have a law which prohibits their eating them, in memory of the combat of Jacob and the angel. ‡ During prayer in the synagogue they wear a kind of blue cap, whence they derive the name of *Lan*-maho-hoai-hoai, to distinguish them

* A translation of this letter from the Portuguese, is published in the eighteenth volume of the Lettres Edifiantes.

† See Grosier, vol. ii. p. 259.

‡ See Genesis, chapter xxxii.

from the Mahomedans who wear a white cap, and are, therefore, sometimes called *Pe*-maho-hoai-hoai. In the early ages of their establishment in China, the Jews possessed employments under the government and great estates, and reckoned more than seventy families of the different tribes of Benjamin, Levi, Juda, &c., but in later times a great part of them were converted to Mahomedanism; and at the period when they were visited by Father Gozani and other missionaries, they were reduced to seven families, comprising about a thousand persons.

The misfortunes of the city of Cai-song-fou, which at all periods appears to have contained a large proportion of their numbers, and their chief synagogue, contributed greatly to lessen their amount. In the reign of Van-Lec a conflagration reduced their synagogue to ashes, and destroyed all their books except a Pentateuch. The synagogue having been rebuilt was again destroyed in 1642 by the inundation of the Hoang-ho, or Yellow River: re-established at the charge of Tchao, a Jewish mandarin, it was called Li-pai-se, "the place of ceremonies," a name which it still retains.

The Li-pai-se, according to Father Domanges, who passed eight months at Cai-song-fou, is about sixty feet in length, and about forty in breadth, but is surrounded by contingent buildings, occupying a space of ground four hundred feet long, and a hundred and fifty wide. The buildings inclose small courts ornamented with figures of lions, vases for incense, flowers, and stone monuments bearing inscriptions setting forth the history of the establishment. Immediately before the Li-pai-se, balustrades inclose a space in which a great tent is pitched for the feast of the Tabernacles.

In the middle of the nave of the Li-pai-se, stands a magnificent chair raised very high, and ornamented with a beautiful embroidered cushion. This is the chair of Moses on which is placed the Pentateuch on Saturdays and other solemn days. Near the chair is a Van-sin-hai, or painting inscribed with the Emperor's name. Over this is written in Hebrew letters of gold: "*Hear, O Israel, Jehovah, our God, is the only God. Blessed be his Name; Glory to His Kingdom for all eternity.*" In another part is a kind of square tent, the "Holy of the Holies" of the Jews in China. They call it Bethel, in the Chinese language Tien-tang, "Temple of Heaven." This place incloses their Ta-kings or great books, as the copies of the Pentateuch are called. Over the Bethel is written in Hebrew characters of gold: "*Know that Jehovah is the God of Gods, the Lord, a great God strong and terrible.*" Behind the Bethel are the two tables of the law written in letters of gold. Near the

entrance of the Li-pai-se, is a hall containing a great number of censers, in which the Chim-gris or great men of the law are worshipped. "The largest of these censers, which is intended for the patriarch Abraham, stands in the middle of the hall; after which come those of Isaac and of Jacob, and his twelve branches or twelve tribes of Israel; next are those of Moses, Aaron, Joshua, Esdras, and several other illustrious persons both male and female." Grosier.

Respecting their sacred books, the following quotation from the memoir referred to, is the only notice which the limits of a note allow me to insert; and I must refer my readers for further information to the interesting memoir itself: "De tous ces monumens les Takings sont les plus intéressans pour les savans de l'Europe. Mais pour s'en former une juste idée, il faut savoir que les Juifs Chinois ne donnent le nom de Taking ou de grande Écriture, qu'au seul Pentateuque. Ils en ont treize copies dans leur Bethel, posées sur treize tables, en mémoire des douze tribus et de Moïse le fondateur de la Loi. Ils sont écrits non sur du parchemin, comme l'a dit le Père Gozani, mais sur du papier dont on a collé plusieurs feuilles ensemble pour pouvoir les rouler sans craindre de les déchirer.

"Chaque Taking du Bethel est roulé sur un pivot, et forme une espèce de tente couverte d'un rideau de soie. Les Juifs ont pour tous ces livres la plus grande vénération. Il y en a cependant un qu'ils respectent plus que tous les autres. Ils prétendent qu'il a trois mille ans d'antiquité, et que c'est le seul monument qui leur reste. — Leurs autres livres ayant péri dans les incendies ou dans les inondations, ils ont été restitués sur les livres des Persans." Lettres Edifiantes, tom. xxiv. p. 54.

P. 155.—*Paludina Sinensis.*

Since that part of this work went to the press, which mentions the occurrence of large quantities of shells on the banks of the imperial canal, I have been obliged to Dr. Leach for the information that he has formed a new genus allied to *Paludina*, which he has called *Bithynia*, to which he refers the shell mentioned in the text, which will be named *Bithynia Sinensis*, and will be soon figured in Baron de Ferrussac's work sur les Coquilles Terrestres et Fluviatiles. The type of the genus Bithynia, Dr. Leach remarks, is Helix tentaculata of Linné, *Cyclostona impurum* of Drapernaud. It is distinguished from *Paludina* not only by the characters presented by the shell, but also by the form of the animal. The tentacula he describes as "*elongato-tereti-subconica*," and the operculum as testaceous.

Page 165.—*Oaks of China.*

I have only preserved specimens of those oaks of China which I shall call *Quercus Densifolia* and *Quercus Chinensis*, in a state to admit of any specific description.

Quercus *Densifolia.*

Q. foliis ovato-oblongis apice attenuatis subtus albicantibus, ramulis pubescentibus, spicis terminalibus erectis.

Hab. prope lacum Po-yang, provinciæ Kiang-si.

Arbor mediocris. *Rami* dense conferti. *Ramuli* juniores præsertim tomentoso-sericei. *Folia* sub-biuncialia perennantia, coriacea, rigida, supra glabra, nitida vix venosa, infra squamulis minutissimis albicantia, venosa, venis prominentibus. *Petioli* semunciam longi, pubescentes.

Quercus *Chinensis.*

Q. foliis lanceolatis acuminatis basi in petiolos attenuatis, spicis fructiferis deflexis.

Hab. prope lacum Po-yang, provinciæ Kiang-si.

Arbor excelsa. *Ramuli* substriati, dichotomi. *Folia* alterna, petiolata 5 ad 6 uncialia, extra medium dentato serrata, coriacea, supra glabra, infra squamulis minutissimis albicantia, nervo venisque primariis parallelis prominentibus. *Spicæ* solitariæ. *Calyces fructus* extus-tecti squamis oblongis valde sericeis, apicibus cuspidatis glabris; intus sericei.

Page 174. — *Oil Plant of the Chinese.*

Camellia *oleifera.*

C. foliis ellipticis acutis subtus aveniis punctatis, calycibus sericeis, germine lanato.

Hab. In Chinæ provinciis meridionalibus.

Frutex altus vel arbor mediocris, ramosissimus. *Rami* teretes, alterni patentes. *Ramuli* suberecti. *Folia* alterna brevè petiolata, petioli supra lanati, bipollicaria apice attenuato-acuta, supra viridia nitida, subtus pallidiora, punctata, fere avenia, nervosa, nervo ad basin prominulo, ad apicem sæpe evanescente. *Flores* sessiles, solitarii vel bini axillares, sæpe terminales. *Calyx* 7-9-phyllus, deciduus; foliola sericea emarginata, interiora aliquoties

majora. *Corolla* pentapetala; petala obovata valde emarginata. *Filamenta* basi manifestè connata. *Germen* lanatum.

Obs. Camellia *Oleifera* differt a C. *Japonica* præter notas specificas petalis emarginatis; a C. *Sasanqua* (*Thunb.*) foliis coriaceis acutis, subtus fere aveniis, et numero majori foliolorum calycis valde sericei.

Page 181.— *Eugenia Microphylla.*

E. foliis obovatis basi attenuatis subtus punctatis, racemis terminalibus folio longioribus.

Frutex sesquipedalis a basi ramosus, rami teretes suberecti, ramuli patentes. *Folia* subsemuncialia verticillata, in ramis adultis sparsa, brevè petiolata, in petiolos attenuata, supra glabra, nitida obsoletè venosa, subtus punctata, punctis sparsis. *Pedunculi* terminales, trichotomi, multiflori, sparsim squamosi. *Baccæ* pisiformes, purpureæ ad basin bracteis duabus squamiformibus instructæ, monospermæ. *Colyledones* plano-convexæ.

Page 226.— *Substitutes for Tea.*

The following passage from Louis Feuillée, respecting the properties of a tall shrub, which he has described under the name of *Capraria Peruviana*, the *Xuaresia biflora* of Ruiz and Pavon, would seem to render it certain that the properties of tea are possessed by other plants.

" Cet arbrisseau (Capraria Peruviana) ne fut connu dans le Pérou qu'en 1709. Ses qualités, qui sont les mêmes que celles du Thé des Indes Orientales, firent que les Peruviens abandonnèrent bientôt celui-ci pour ne se servir que de celui qu'ils avoient chez eux; et il étoit déjà devenu si commun lorsque je partis de ce royaume, qu'on ne parloit plus que du Thé de la rivière de Lima." — Feuill. tom. ii. p. 764.

An infusion of the leaves of the *Atherosperma Moschata* has been used as tea. Mr. Brown, who accompanied Capt. Flinders to Terra Australis, has permitted me to state, that whilst engaged in that country on his botanical researches, he usually carried with him a supply of tea, as the means of the most grateful refreshment. His attendants for a long time drank it with delight, but unexpectedly relinquished it for the infusion of the leaves of

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Atherosperma Moschata, which they found in the woods, and never recurred to it when they could command the new-found substitute. Mr. Brown also found that a slight infusion of the leaves of the *Correa Alba* so resembled tea, as to deceive some of those who partook of it.

Page 318. — *Orang-Outang.*

Camper states, in his anatomical treatise on the Orang-Outang of Borneo, that in all the specimens of this animal which he examined, the great toes were without nails, and thinks the want of the nail characteristic of its species. "This Monkey or Orang, is possessed of the peculiar quality of having no nails on the great toes. In my first Orang I did not immediately perceive this peculiarity, but I presumed that the same would be the case with all the rest.

"M. Van der Meulin, on my request, took his Orang out of the vessel in which it was kept in spirits, and had the goodness to inform me on the 21st June 1771, that it also had no nails on the great toes.

"Before M. Allamand published his description, he did me the honour to send me a proof impression of his Orang, in which I found the nails of the great toes very plainly represented: this surprised me, since I also met in Edwards' drawing the same large nails on the great toes. M. Allamand being in the mean time apprised by me of this difference, examined again his Orang, and corrected the fault of the engraver in his description, page 75.

"During this time I had also written to M. Rooistra, at that period a renowned physician at the London Infirmary, and formerly one of my most esteemed auditors, in order to examine with M. Maty of the British Museum, whether the Orang represented by Edwards with such large nails, had them in reality, on the great toes. On the 24th July 1772, I received for answer, 'that there were no nails, even no remnants of them; much less vestiges to be seen on the great toes of the Orang:' so little reliance can be placed on engravings, if they be not executed by experienced and attentive draftsmen, and under inspection of men acquainted with science.

"The Orang presented by M. Hope, which I still preserve in spirits, had likewise no nails on these parts, or that which was lent me by M. Vosmær; neither were they on the great toes of the live Orang. But there was a very small nail on the large toe of the right foot of the

Orang of M. Van Hoey, and two joints; while in the great toes of all the others there was but one: this difference appears rather to have been a lusus naturæ; for the great toe of the left foot was, as in the former Orangs, without a nail and with one joint. We may therefore conclude, that this is something peculiar to this species. For although the Gibbon by Landaard agrees in shape pretty well with the Orang, yet it has very large and visible nails on the great toes, the same as may be seen in the large as well as the small Gibbon of Buffon; but still plainer in the skeleton which M. Van der Steeg had the goodness to send me not long ago from Batavia; of which we are to speak more fully hereafter." Manuscript translation of Camper's Treatise of the Orang-Outang of Borneo.

In addition to the facts adduced by Camper, I may state, that I have been indebted to the kindness of Sir Joseph Banks, for the opportunity of examining a manuscript notice respecting an Orang-Outang which he saw at Batavia, in the year 1770, in which the character "*Pollex pedum sine ungue*" is distinctly stated. I have examined an Orang-Outang from Borneo, preserved in spirits in the College of Surgeons, and found it without nails on the great toes. The Orang-Outang described in the text, as I have already stated, is also without them. Thus, including Camper's, there are no less than nine indisputable instances in which Orang-Outangs from Borneo or the neighbouring islands have been found without nails on their great toes. So many concurring testimonies respecting the existence of an important character in so many individuals of the same species would seem to be decisive in favour of admitting it as a specific distinction of the animal. The absence of the nail is a character of the greater importance, from being, according to the experience of Camper, always accompanied by the absence of one of the phalanges of the great toes.

Camper, however, has been blamed by a great naturalist, for considering the want of the nail a constant character in the Orang-Outang of Borneo: "*Il a eu tort de croire que les ongles manquent toujours à ses pouces de derrière.*" * This opinion has, perhaps, been derived from the descriptions given by M. Frederick Cuvier † and Tilesius ‡ of two Orang-Outangs

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* Règne Animal, tom. i. p. 103.

† Annales du Muséum d'Hist. Nat. tom. 16.

‡ Appendix to Krusenstern's Voyage.

supposed to be brought from Borneo. I venture to use the qualification, "supposed," in this place, although I have quoted these authors as describers of the Orang-Outang of Borneo in the text; because, as it appears to me, there is a deficiency of that direct evidence, both in F. Cuvier's and Tilesius's account, which is necessary to fix the habitations of the animals which they describe. The former received his specimen from the Isle of France by the hands of M. Decaen, who stated that the animal had come there from *Borneo. Tilesius saw the animal that he has described at Macao, in the possession of the Portuguese governor, who believed that it had been brought from Borneo. † It is one amongst many objections to this hearsay evidence, that in the Eastern islands it is generally known that a species of Orang-Outang inhabits Borneo, and that when Europeans in the East see any monkey without a tail, they are liable to take for granted that it comes from that island; and unless induced by scientific notions, are not likely to take much pains in investigating the truth of their opinion. But till the accounts of travellers respecting monkeys without tails, remarkable for their resemblance to man, and supposed to inhabit different parts of the East, as the ‡*Fese* of China and *Golok* § of Bengal, are disproved, it is necessary to be more cautious in determining the dwelling places of similar animals that may fall under our notice. Taking for granted that there was only one animal which

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* Cet Orang-Outang arriva à Paris dans les commencement du mois de Mars 1808. M. Decaen, capitaine général des Iles de France et de Bourbon, l'avoit ramené de l'Isle-de-France, et en avoit fait hommage à Sa Majesté l'Imperatrice Joséphine, dont le gout éclairé pour l'histoire naturelle a déjà procuré à ceux qui se livrent à l'étude de cette science de si nombreux et de si rares sujets d'observations. Lorsqu'il arriva de Bornéo à l'Isle-de-France, on assura qu'il n'avoit que trois mois; son séjour dans cette île fut de trois mois; le vaisseau qui l'apporta en Europe mis trois mois à sa traversée; il fut débarqué en Espagne, et son voyage jusqu' à Paris dura deux mois, d'où il résulte qu'à la fin de l'hiver de 1808 il étoit âgé de dix à onze mois. Annales du Muséum, tom. xvi. p. 51.

† Tilesius, after enumerating some curiosities shown him by the Governor of Macao, and said to be brought from Borneo, states that he also saw a "Jocko, or East Indian Orang-Outang, which was brought from the same island." Manuscript translation of Appendix to Krusenstern's Voyage.

‡ "The province of Fokien hath an animal perfectly resembling man but longer armed, and hairy all over, called Fese, most swift and greedy after human flesh; which, that he may the better take his prey, he feigneth a laughter, and suddenly, while the person stands listening, seizeth upon him." Nieuhoff's China, Ogilby's translation, folio, 2d edition, p. 413.

§ The only authentic figure and description of the Golok by De Visme, is published in the 59th volume of the Philosophical Transactions.

had been called Orang-Outang, led the great Buffon* to confound the Pongo of Africa, (*Simia Troglodytes* of Linnæus,) described by Tulpius, Tyson, Buffon, and others, with the Borneo Orang-Outang. A similar error might induce naturalists of the present day to confound the true Borneo species with others of its tribe. For these reasons I think it safer to conclude, that the descriptions of F. Cuvier and Tilesius are deficient in satisfactory evidence of their animals being natives of Borneo. But it may be said, if all the characters of these animals accord with those of the Borneo species, excepting in the presence of nails on the great toes, no other evidence of their identity is required. In examining the description of F. Cuvier, with a view to this question, I find an important difference between the relative length of the arms and height of his animal, and the same dimensions of the one that I have described. The greatest height of his animal, measured in the ordinary standing posture, was thirty inches, and the length of his arm eighteen. "Debout, dans sa position naturelle, sa taille n'excédoit pas 26 à 30 pouces; la longueur de ses bras depuis l'aisselle jusqu'au bout des doigts étoit de hix-huit †pouces." The greatest height of the animal that I have described, whether in his standing posture or when stretched out on a table, is thirty-one inches and a half; and his arm from the axilla to the end of the finger measures twenty-five inches. In F. Cuvier's animal, therefore, the length of the arm compared with the height of the body was as 18 to 30; in mine, it is 25 to 31-5; so that in the smaller animal, the height of the body is greater in proportion to that of the arm than in the larger. When the animal which I have described is stretched at full length, the ends of his fingers reach below the external ancle. In a drawing of the animal described by F. Cuvier, from the stuffed specimen preserved at Paris, made at my request under the inspection of Dr. Leach, the appearance of the arms corresponds with the measurement given in the Annales du Muséum; the ends of the fingers do not reach to the external ancle. This difference in the proportions of two animals, in which it might be expected that distinction of species would be as much marked by the proportion of parts, as by their form, seems almost sufficient, especially in conjunction with the remarkable difference of structure in their toes, to separate them distinctly from each other. As Tilesius has given no dimen-

* Histoire Naturelle, tom. xiii. This error is corrected in his supplement, tom. ix.
† Annales de Muséum, tom. xvi. p. 46.

sions of his animal, I have been unable to compare them with those of the Orang-Outang which I have described. His description of the general characters of his animal certainly answers to those of the Orang-Outang of Borneo; but the greater number of them belong also to the *Simia Troglodytes* of Linnæus.

Another animal which resembles in most of its external characters the Orang-Outang from Borneo, is the large monkey described by Wurmb, and which he called the Pongo or large Orang-Outang. The skeleton of Wurmb's animal is preserved in the Museum of Natural History of Paris, and has been described and figured by Geoffroy*, who has endeavoured to prove that it belongs rather to a non-descript genus closely allied to the Mandrils. Tilesius † has, however, conjectured that it is the same animal as the Orang-Outang from the East Indies described by different writers, and that it only differs from them in being full grown. In this opinion he has, according to a notice contained in one of the late numbers of the Annals of Philosophy, been followed by Cuvier, who supposes all the Orang-Outangs that have reached Europe to have been the young animals of the species described by Wurmb. Tilesius has stated no grounds for his conjecture; Cuvier's dissertation, which was read on the 16th of February to the Academy of Sciences, is not published. I would, however, with deference remark, that in comparing Camper's description of the skeleton of the Orang-Outang of Borneo, with the description and figure published by Geoffroy, important anatomical distinctions may be observed. In Camper's figure of the skull of his Orang-Outang, those dimensions are most expanded which in Geoffroy's plates are the reverse. In Camper's, the *os frontis* rises abruptly from the orbits, and forms with the *ossa parietalia* an ample arch, giving to the upper part of the cranium a spherical form. In Geoffroy's plate, the *os frontis* slopes suddenly from above the orbits, and the cranium is flattened on the sides. In Camper's the occipital foramen is nearer the centre of the cranium than in Geoffroy's. In Camper's plate the spine articulates with the head at an acute angle, and the first cervical vertebra allows the head no motion backwards. In Geoffroy's plate the spine articulates with the head at

* Journal de Physique, 4to. vol. iii. p. 400.

† Manuscript translation of the Appendix to Krusenstern's Voyage.

right angles, and the first cervical process is at so great a distance from the cranium, as to allow the head extensive motion backwards. Such are the differences which, according to the testimonies of Camper and Geoffroy, exist between the skeletons of Wurmb's animal, and that of the Orang-Outang of Borneo; and which, together with the absence of nails on the great toes of the former, and their existence on those of the latter, are surely sufficient, in the present state of our knowledge, to justify their being considered as distinct animals.

I shall conclude these observations on the Orang-Outang of Borneo, by quoting Camper's description of a peculiar appendage to the larynx of the animal, which, as he gravely tells us, shows the fallacy of the opinion which supposes Orang-Outangs will not speak, from their apprehension of being made slaves by men: I have also added some of the anatomical differences by which he distinguishes them from man.

"In December, 1770, I dissected at Groningen, the Orang of M. Hoffman with the greatest accuracy: removing the skin and the broad muscles of the neck, I found the tongue-bone closely resembling that of the human species, and pretty large for the size of the animal. Pursuing my dissection, I discovered a large sack on the right side, running over the clavicular bones, and another on the left side, but visibly smaller.

"The large sack tore a little on account of its being tender, by having laid so long in spirits: I inflated it through the opening, which I continued quickly, as I perceived that the air went off betwixt the tongue-bone and the thyroideus cartilage; I then followed up the rent with a pair of scissars, and cut open the sack, by which means I discovered a transverse split. There was now no doubt any longer, but that the left sack had a similar orifice.

"In pursuance of it, I took away the whole soft palate and the æsophagus, as far as below the speaking organs. The soft palate is the same as in most quadrupeds, with this difference, nevertheless, that the uvula on the hind side runs very evidently downwards, but not beneath the margin of the soft palate, much less does the uvula descend as in the human species. This palate appears, however, more capable than in other animals to be voluntarily contracted.

"Two such air-sacks were also found in the Orang sent me for investigation by M. Vosmær, and again returned to him. The same were in the Orang which I dissected at the house of M. Van Hoey, on the 31st August, 1774, and were shewn to him and his son.

" However, in the Orang presented to me by M. Hope there was some difference: the tongue-bone was the same as in the two former, but there was merely one single sack, having two air tubes, which united themselves with the two splits.

" In opening further the skin of the breast, and separating the broad muscles of the neck, I saw one single sack, and inflated it through the throat of the Orang, upon which it appeared, that it was indeed derived from two membraneous tubes, as in the three former ones, but that the two sacks were gone over into one: had this been produced by touching or pressing, or had they been so from its birth?

" It was also plainly seen, that the part of the right side, being larger than the left one, left behind a sort of partition, by the narrowing betwixt. If air was introduced through the one or other opening at the side of the epiglottis, the whole sack expanded equally; and if strongly blown into it, the appendages became more considerably visible.

" As soon as the trunk of the Orang-Outang was sent me from the Hague by M. Vosmær, I examined the speaking organs, removed the flaps of the two latissimi colli, or broad muscles of the neck, very carefully, and prepared every thing as well as I could, blowing from time to time through the larynx, by which I perceived, that in this Orang both the sacks had also gone over into one, but they were much larger than in the one just described from M. Hope; the bottom ran nearly to the end of the breast bone, and was partly covered by the breast muscles; the sack ran upwards above the clavicular bones, and with the appendages still more backwards, so that this sack penetrated on each side deep under the monk's-hood muscles, as far as behind upon the shoulder-blades.

" As the Orang gets older and taller, so extends this sack, probably by degrees more and more, the same as we see in herbiverous animals, that, when just brought forth, their fourth maw is larger than the paunch; and on the contrary, that this latter, by means of the continual further expansion in the eating of food, becomes again considerably larger than the former: the air performs here the same, and the sack having expanded more and more betwixt the just-now enumerated parts, obtains gradually these manifold extensions, under the shape of appendages.

" When I brought the blow-pipe into the larynx, and shut the split, I blew the lungs up first, and these being filled, the air immediately penetrated into this large air-sack. It does not appear to me that the passing over into

one, or natural union of these two sacks, can occasion any detriment in the use of it, because we see something similar taking place in the kidneys of the human species, whose lower parts are not unfrequently united with each other in such a manner as if they constituted but one, having however separate blood-vessels, and each forming on that account a ureter, without being able to see, from the skeleton of the body, that any obstacle has been occasioned by it. I possess one of this kind in my collection of anatomical preparations.

"The Orang can, in the mean time, voluntarily swell up these sacks, or this united sack, whenever it tries or attempts to press the strongly inhaled air outwards, and presses then the epiglottis towards the opening of the larynx, or bends it only a little. It can also empty them at pleasure, by means of the broad muscles of the neck, by those of the breast, and by the cucullares or monk's-hood muscles: the Rendeer, whose air-sacks do not lie beneath these muscles, has received from nature two muscles, which originating from the tongue-bone, spread out their fibres, and surround the whole air-sack.

"We conclude from this, that in the tailed monkeys, and in the Egyptian monkey without tail, in which we have found a single air-sack towards the throat, as well as in the Orangs, who naturally have two, although sometimes gone over into one, the air, more or less, by means of the split formed by the larynx, loses all its force to diffuse itself from its own accord in this sack or sacks.

"There is an apparent conformity betwixt these speaking organs and those of the male frog, which likewise press the air the length of the tongue, into two bladders, situated sideways, and presses it out again with the known sound, from the same openings below the tongue, by means of the muscles of these bladders, as I have, I apprehend, demonstrated plainly in my treatise on the croaking of frogs." *

The following marks of distinction between the Orang-Outang and man, have already been transcribed from Camper, by Tilesius in the appendix to Krusenstern's Voyage.

"1. The upper jaw of the Orang-Outang does not stand perpendicularly under the arch of the forehead, but makes an angle of fifty-eight degrees

* Manuscript Translation of Camper's Treatise on the Orang-Outang of Borneo.

with the facial line. It consists also of two bones, the upper maxillary, and the intermaxillary, the latter of which is wanting in man.

"2. The temporal bones are very small; and the cervical vertebræ have long processes, which prevent the head from being carried backward in any considerable degree.

"3. The pelvis. The ischia are high, flat, and small, so as to form nearly a flat surface with the ilia and sacrum; whence the cavity of the pelvis is small. Hence too the cavity of the abdomen is smaller than that of the thorax.

"4. The spine. In the Orang-Outang it proceeds downward in a straight line; in man on the contrary it has the figure of a Roman S.

"5. The duodenum of the Orang-Outang has no rugæ. The liver and gall bladder too are not like those of man.

"6. Its proportions. The head is a sixth part of its whole length, in man it is only an eighth.

"7. Length of the arms. It fathoms with these eight lengths of the head, consequently two more than its own height: a man fathoms exactly his own height.

"8. Length of the hands. Its hand is equal to a ninth part of its height, and is consequently longer in proportion than its head; in man the hand is the length of the face.

"9. The feet. These are about a fifth of its height; those of man are a sixth.

"10. The thorax. This is slender and deep, whence it cannot lie on the back."

The tenth observation does not apply to the animal that I have described, as he frequently lies on his back; some of the others are objectionable, because the animals from which the proportions were taken had not reached their full growth.

Tilesius has mentioned, on the authority of Camper, the existence of thirteen ribs amongst the characteristic marks of the Orang-Outang of Borneo, but in doing so appears to have fallen into an important error. In consulting Camper I find that he distinctly states, that the skeleton of his Orang-Outang had only twelve ribs. "In het geraante van den Orang-Outang bevonden zig *zes waare* dat is met het borst-been vercenigde ribben, en *zes onwarre*."* — "In the skeleton of the Orang-Outang there were found six true ribs, *i.e.* inserted in the sternum, and six false ones."

* Natuurkimdige verhamdelingen van Petrus Camper overden Orang-Outang, p. 17.

APPENDIX.—B.

Containing Characters and Descriptions of Three New Species of Plants; selected from the only Part of Mr. Abel's China Herbarium that escaped the Wreck of the Alceste; consisting of a small Collection presented by him to Sir George Staunton at Canton.

By Robert Brown, F. R. S.

HAMAMELIS. *Linn.*

Syst. Linn. Tetrandria Digynia.

Char. Gen. *Petala* 4, elongata, æstivatione valvato-involuta! *Capsula* semiinfera, bilocularis. *Semina* solitaria.

Ord. Nat. Hamamelideæ, *Br.*

Char. Gen. *Petala* elongata, æstivatione valvato-involuta!

Obs. Hamamelideæ notis præsertim sequentibus distinguuntur. *Flos* semisuperus, completus, tetrapetalus. *Stamina* antherifera quatuor, petalis alternantia: *Antheris* basi insertis, bilocularibus, loculo singulo dehiscenti valvula unica medio semiseptifera, et vel altera sutura incompleta persistenti, vel utraque solubili decidua. *Ovarium* biloculare, loculis monospermis, ovulis pendulis (v. appensis). *Styli* duo. *Fructus* semiinferus, capsularis. *Embryo* longitudine fere albuminis: *radicula* supera.

Huic ordini, cui referenda Hamamelis *Linn.*, Dicoryphe *Aub. Du Petit-Thouars*, et Dahlia *Thunb.*, forsan adjicienda, in distincta tamen sectione, Fothergilla *Linn.*, pericarpio, semine? necnon habitu similis; petalorum defectu, staminibus numerosis et dehiscentia antherarum diversa.

Hamamelideæ hinc affines, *Bruniaceis*, (ordo cui pertinent Brunia, Staavia, Linconia, Thamnea et Erasma,) ab iisdem distinguuntur autherarum insertione et dehiscentia, ovarii loculis monospermis, capsulæ dehiscentia, floribus quadrifidis et habitu: inde accedunt Corno, Marleæ *Roxb.* (quæ Stylidium, *Lour.*; fide exempl. ab ipso auctore,) generibusque affinibus, et quodammodo *Araliaceis*; diversæ structura antherarum, fructu capsulari aliisque notis.

HAMAMELIS CHINENSIS. *Tab.*

Hamamelis foliis integerrimis. *Soland. Mss. in Biblioth. Banks.*

Arbuscula sinensis cisti minoris folio rigidiore, flores candicantes in 5 vel 6 lacinias longas angustas ad umbilicum usque divisos binatim plerumque ferens; fructu ovato parvo bivalvi villoso glandis ad instar calyculato. *Cunningham in Pluk. Amalth.* 32 *, *tab.* 368. *fig.* 2. fide speciminum in Herb. Pluk.

Loc. NAT. China prope Nan-king, *D. Abel.;* Insula Cheusan, *Cunningham.*

DESCRIPTIO. *Frutex* decumbens, ramosissimus, ramis ramulisque teretibus, ultimis cinerascentibus, furfuraceis pube stellari brevi. *Folia* alterna, brevè petiolata, integerrima, subovata, acutiuscula vel obtusa, basi inæquali, uninervia, supra avenia, subtus venis anastomozantibus reticulata, utrinque pube stellari brevi, subtus copiosiore, cinerea, 8-10 lineas longa. *Stipulæ?* caducæ. *Capitula* 3-5-flora, pedunculata, ramulos breves terminantia v. axillaria. *Calyx* pube stellari cinereus, furfuraceus; limbo supero, quadrifido, laciniis ovatis, planis, trinerviis, extus pubescentibus, intus glabris, æstivatione imbricatis, deciduis. *Petala* 4, æqualia, laciniis calycis alternantia, elongata, calycem aliquoties, ter quaterve, superantia, membranacea, glabra, plana, linearia, obtusa, integerrima passimque emarginata, trinervia, nervis ad basin usque distinctis, infernè simplicissimis, supernè divisis, medio ramosiore; æstivatione e basi valvata, supra seorsim spiraliter involuta. *Stamina* antherifera quatuor, epigyna, æqualia, calycis laciniis opposita, brevia, æstivatione conniventia. *Filamenta* brevissima, glabra, crassiuscula. *Antheræ* stantes, ovato-quadratæ, glabræ, acumine subulato adscendente, ipsa anthera dimidio breviore; biloculares, loculis lateralibus, medio longitudinaliter sulco, septum partiale indicante, insculptis, valvulâ unicâ medio semiseptiferâ, deciduâ. *Squamulæ* (stamina sterilia,) quatuor, glabræ, abbreviatæ, latiores quam longæ, emarginatæ v. semibifidæ, staminibus alternantes. *Ovarium* inferum, brevè turbinatum, disco epigyno nullo, biloculare, loculis monospermis, ovulis pendulis (appensis). *Styli* duo, brevissimi, distantes. *Stigmata* simplicia. *Capsula* semiinfera, corticata, dicocca, coccis semibivalvibus, contrariis segmentis corticis bivalvis.

Obs. Hamamelis Chinensis a Virginica differt valvulis antheræ deciduis pauloque habitu, an itaque (sub nomine Loropetali) in proprium genus separanda?

TABULÆ EXPLICATIO.

Ramus florifer et Ramulus fructifer, uterque magnitudine naturali.

Ad alterum latus tabulæ Flores magnitudine aucti.

1. Flos hinc apertus et vi expansus.

2. Anthera ante dehiscentiam: 3. Eadem post dehiscentiam, valvulis jam delapsis.

4. Pars floris cum ovario longitudinaliter secto; ostendens stylos duos et loculos monospermos.

5. Ovulum, cicatrice umbilicali juxta apicem.

6. Capsula, magnitudine naturali.

7. Pubes stellata, aucta.

ABELIA. *

SYST. LINN. Didynamia Angiospermia, post Linnæam.

CHAR. GEN. *Pericarpium* inferum, (abortione) monospermum, indehiscens, calyce foliaceo coronatum. *Involucrum* 2-multiflorum, 6-polyphyllum.

ORD. NAT. CAPRIFOLIACEÆ, Sect. I. *Juss. gen.* 211. (Lonicereæ *B.*) inter Linnæam et Symphoricarpum.

CHAR. GEN. *Calyx* foliaceus. *Corolla* subinfundibuliformis, 5-loba. *Stamina* 4, didynama. *Ovarium* 3-loculare: loculis duobus polyspermis, abortientibus! tertio monospermo fertili. *Pericarpium* monospermum, indehiscens, calycis limbo foliaceo coronatum. *Involucrum* bi-multiflorum, foliolis sex pluribusve.

Frutices *decumbentes vel debiles, glabri:* Folia *opposita, petiolata, dentato-crenata.* Pedunculi *modo axillares, trichotomi vel trifidi; modo terminales indivisi.*

PATRIA China et Japonia.

Obs. *Linnæa* proximum genus, quacum convenit staminibus didynamis et structura ovarii! diversum fructu hinc uninervi inde quinquenervi, coronato calycis limbo foliaceo persistente, necnon inflorescentia et habitu.

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* This account of the genus ABELIA is extracted from a manuscript dissertation on the natural order to which it belongs.

Symphoricarpus habitu paulò magis accedens *Abeliæ*, ab eadem facile distinguitur, inflorescentia, floribus pentandris, ovarii quadrilocularis loculis duobus monospermis, fertilibus; duobus reliquis polyspermis sterilibus!

Triosteum fructu calyce foliaceo coronato *Abeliæ* simile, abunde diversum est ovarii trilocularis loculis omnibus monospermis fertilibus, floribus pentandris et inflorescentia.

Abelia Chinensis. *Tab.*

Abelia involucris bifloris, pedunculis trichotomis, staminibus exsertis.

Loc. Nat. Chinæ provincia Kiang-si; prope lacum Po-Yang. *D. Abel.*

Descriptio. *Frutex* decumbens. *Ramuli* virgati, cinerascentes, pube tenuissima, per lentem solùm obvia. *Folia* opposita, petiolata, exstipulata, vix uncialia, ovata, acutiuscula, plana, crenato-serrata, uninervia, venis anastomozantibus, immersis, paginis subdiscoloribus, superiore pube rarâ brevissimâ simplici conspersâ, marginibus per lentem ciliatis pilis acutis. *Pedunculi* e summis alis et terminales, approximati, thyrsi speciem efformantes, trichotomi, quandoque tantum trifidi, divisuris bibracteolatis. *Involucrum* biflorum, hexaphyllum, subæquale, persistens, abbreviatum, ovariis sessilibus aliquoties brevius. *Calyx* superus, limbo quinquepartito, æquali, laciniis spathulato-oblongis, planis, patentibus, uninerviis, venosis. *Corolla* infundibuliformis, calyce duplo longior: *tubo* quinquenervi, nervis quatuor approximatis, quinto distanti: *fauce* imberbi: *limbo* quinquifido, patenti, laciniis ovatis, obtusis, subæqualibus. *Stamina* quatuor (absque rudimento quinti): *Filamenta* dimidio inferiore tubo corollæ adnata, ejusdem nervis quatuor approximatis primo intuitu subopposita, sed reverà alterna; superiore libera, filiformia, pilosiuscula, parum inæqualia, apicibus exsertis: *Antheræ* incumbentes, oblongo-lineares, loculis appositis, absque manifesto connectivo, medio longitudinaliter dehiscentibus. *Ovarium* inferum, lineari-oblongum, modice compressum, tenuissime pubescens, hinc uninerve (fig. 2.), inde quinquenerve (fig. 1.), in collum breve apice angustatum, basi acuta parum attenuata; triloculare (fig. 1. et 3.) (collo e divisione chordæ pistillaris fenestrato), loculis duobus (interioribus?) polyspermis, ovulis simplici serie insertis, supremo erecto! reliquis pendulis, omnibus constanter abortientibus; loculo tertio in latere uninervi (exteriore?) ovarii, monospermo, ovulo ovato, reliquis aliquoties majore, a margine inferiore fenestræ chordæ pistillaris pendulo, vasculoso fasciculo dorsali! *Stylus* filiformis, glaber, longitudine

staminum. *Stigma* depresso-capitatum, indivisum, imberbe. *Pericarpium* figura ovarii, eoque vix duplo majus, calycis limbo, proportionatim aucto, coronatum, monospermum, loculis duobus abortientibus ad alterum latus pressis (fig. 4.), indehiscens, coriaceum, exsuccum. *Semen* (fig. 4. et 5.) subcylindraceum, cavitatem ovarii fere replens, prope apicem insertum funiculo brevi. *Integumentum* duplex: *exterius* membranaceum, laxiusculum; *interius* tenuissimum, albumine arctè adherens. *Albumen* (fig. 6.) figura et magnitudine seminis, dense carnosum, album. *Embryo* (fig. 6. et 7.) axilis, rectus, albus, albumine aliquoties (fere quadruplo) brevior: *Cotyledones* breves: *Radicula* supera.

Obs. The genus *Abelia* is named in honour of its dicoverer, Clarke Abel, Esq. who accompanied the late Embassy to China, as Chief Medical Officer in the suite of Lord Amherst. Nearly the whole of the extensive collections formed in China by this zealous naturalist were, unfortunately for science, lost in the wreck of the Alceste; the only part saved being a small selection of specimens of plants which he had presented, while in China, to Sir George Staunton, by whom they were most liberally returned to him on his arrival in England.

EURYA. *Thunb. Jap.* p. 11.

Syst. Linn. Polygamia Dicœcia.

Char. Gen. Hermaph. *Calyx* 5-part. *Corolla* monopetala, 5-partita. *Stamina* 12—15. *Ovarium* superum, 3-loc. *Stylus* 1. *Stigmata* 2—3.

Mas. Cal. Cor. et Stam. ut in Hermaph. *Pistillum* o.

Fem. Cal. Cor. Hermaph. *Stamina* o. *Ovar.* 3-loc. *Stylus* 1. *Stigmata* 3, revoluta. *Bacca* polysperma.

Ord. Nat. Ternströmaceæ. *Mirbel, Nouv. Bullet.* 3. p. 381. *De Candolle, Prop. Med. des Plantes*, p. 203.

Char. Gen. Flores Polygami-Dioici. *Calyx* 5-part. *Petala* 5, unguibus connatis. *Stamina* 12—15, simplici serie. *Ovarium* 3-loc. polyspermum. *Stylus* 1. *Stigmata* 3. *Bacca* triloculari, polysperma. *Semina* reticulata.

Obs. Proximum genus *Fresieræ*, distinctum floribus polygamis et petalis basi connatis.

EURYA CHINENSIS. *Tab.*

Eurya, foliis cuneato-ovalibus obovatisque, ramulis ultimis pubescentibus.

Loc. Nat. Chinæ provinciæ Kiang-si et Quang-tong; in campis et collibus.

DESC. *Frutex* bipedalis, ramosissimus, erectus, ramis teretiusculis, patentibus, novellis pube simplici, copiosa, subappressa. *Folia* alterna, petiolata, exstipulata, coriacea, sempervirentia, cuneato-ovalia passimque obovato-cuneata, serrata, novella subtus pilis raris conspersa, vix uncialia, siccata subtus præsertim flavicantia. *Flores* parvi, axillares, 3—5, fasciculati, brevè pedunculati, pedunculis apice bibracteolatis. *Calyx* foliolis ovatis, obtusiusculis, duobus exterioribus oppositis minoribus, æstivatione imbricatis. *Corolla* monopetala, subcampanulata, alba, calyce sesquilongior, e petalis quinque, unguibus arctè connatis, laminis obovatis apice patulis, formata. *Stamina* circiter 12—15, hypogyna, simplici serie inserta, basi corollæ leviter cohærentia. *Filamenta* filiformia, glabra, antheris parum longiora. *Antheræ* juxta basin leviter emarginatam insertæ, lineares, mucronatæ, biloculares, loculis absque manifesto connectivo appositis, medio longitudinaliter dehiscentibus. *Ovarium* sessile, disco nullo cinctum, ovatum, glabrum, triloculare, loculis polyspermis. *Stylus* unicus, subulatus, glaber. *Stigmata* tria, filiformia, obtusiuscula, stylo breviora. *Masculi flores* absque pistillo. In *femineis* nulla rudimenta staminum.

OBS. Quam maxime affinis Euryæ Japonicæ *Thunb. Jap.* 191., quæ ramulis ultimis glaberrimis foliisque ellipticis acutis distincta.

APPENDIX.—C.

OFFICIAL DOCUMENTS
ISSUED BY THE GOVERNMENT OF CHINA.

No. 1. Referred to in page 63.

The Emperor of China's Reply to the Report made to Court by the Viceroy of Canton, respecting the Embassy from His Royal Highness the Prince Regent.

On the 29th of the 5th moon of the 21st year of Kea-king, (24th June, 1816) the following high decree was received (at Peking) with profound respect:

Tung, the Foo-yuen, and acting Viceroy of Canton, and other officers of rank in the province, have forwarded to Court a dispatch, announcing an Embassy with presents (the original word is often translated tribute) from England. As the English nation offers presents, and tenders its sincere good will with feelings, and in language respectful and complaisant, it is doubtless proper to allow the Embassy and presents to enter China, and the ship bearing them to proceed to Teen-sing, that the Ambassador and suite may disembark.

Imperial orders have already been issued to the Viceroy of *Pe-tche-le* (Na-yen-ching) to arrange all affairs on the present occasion, in a liberal, gracious, and suitable manner.

The above-mentioned *Foo-yuen* and acting Viceroy, with his colleagues, being apprehensive that at the port of *Teen-sin*, and other places on the coast, there are no persons well acquainted with the manners of foreigners, propose to enjoin the Hong merchants to select and appoint two men who understand the foreign character, that one may be sent to the province of *Pe-tche-le*, and the other to *Che-keang*, to wait there at the palaces of the Viceroy and Foo-yuen, to be ready to translate when required. This arrangement is extremely good.

As to the foreign officer, (Captain Clavel) sent by the King of England, now at Canton; let the Viceroy say to him, "I have reported to the Great

Emperor the intention of your King, to send presents to manifest his sincere good will; and have now to return thanks (to my Sovereign) for his consenting that the Ambassador from England should proceed to Court where he will assuredly be received and presented with gifts."

The foreign officer above-mentioned, may, agreeably to our regulations, return home.

Let this decree be made known by a *Woo-lu*, (an express travelling at about one hundred English miles a day.)

Respect this.

Translated by Mr. Morrison.

No. 2.

Ho's Report from Tung-chow, *misrepresenting the Conduct of the Ambassador.*

His Majesty's edict has been respectfully received, and is as follows:

Ho-she-tae has stated to His Majesty, that the English tribute-bearer is daily practising the ceremony, and manifests the highest possible respect and veneration.

The said nation, separated by a vast ocean, offers up a sincere tribute of profound respect and veneration. Tribute was first sent in the 58th year of Kien-lung; and now prostrate she sends an Ambassador to Court to offer presents, with respect worthy of high commendation.

To-day* *Ho-she-tae*, and Moo-kih-tang-yih, have brought the Ambassadors to the house at Hay-teen.

It is ordered, that on the 7th (29th August) he be admitted to an interview, &c. &c. (Exactly the same as in the Vermillion Edict) and on the 12th be ordered home.

No. 3.

Outline of the Ceremony to be observed on the English Ambassador's presenting the Piaou-wan, *or Official Document from his Sovereign.*

About four o'clock in the morning of that day, arrangements shall be made for the occasion in the great *Kuang-ming-tëen* †, (Palace or Hall of Light

* To-day, viz. 28th August.

† The same probably as Barrow describes.

and Splendour). Certain bands of music shall attend in the hall. There certain princes and other personages shall assemble, together with the Ambassador and his suite. Cushions to sit on shall be placed in the hall.

About five o'clock His Majesty shall, with profound veneration, be requested to put on the dragon robes, and to ascend the throne in the palace of Light and Splendour.

The Princes, the royal personages, and the attendant officers, shall be attired in certain court dresses.* The great officers of state who attend in the imperial presence. The Kings and Dukes who attend on His Majesty shall be arranged in two wings, standing. The imperial body guard, in their leopard-tailed dresses, shall be drawn up in two wings within the palace.

When the Princes, royal personages, and other officers are arranged, the band shall strike up *Lung-ping*, (a glorious subjugation, or tranquillity,) and the great officers of state shall, with profound veneration, conduct His Majesty to the throne, after which the music shall stop.

When the officers around His Majesty's person have proclaimed the word *Pëen* (whip), the band shall strike up the tune of *Che-ping* (a subjugating or tranquil sway), and the officers *Soo*†, with *Kwang-hwae*, accompanied by an officer of the *Lee-poo*, and an imperial astronomer, shall conduct the English Ambassador, his deputies, and suite, to present with profound veneration the *Peaou-wan* (official document).

They shall enter at the right‡ hand gate, and proceed to the west side of the passage at the foot of the Altar of the Moon, without-side the Hall of Light and Splendour.

The crier shall proclaim, "Be arranged;" the Ambassador and his suite shall arrange themselves in ranks: the crier shall proclaim, "Kneel;" the Ambassador and suite shall then kneel, and the music shall stop. The crier shall proclaim, "Present the Peaou-wan;" the Ambassador shall respectfully present it to Ko-lĭh-chĕ-e-too, who having received it shall advance by the middle path to the inside of the palace, where, kneeling at *Je-ping*§,

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* There are various dresses in use among the Chinese on such occasions, which are not easily described but by a person conversant in these ceremonies.

† Soo, President of the Board of Rites and Ceremonies, and Kwang, commonly called by us the Legate, were the Negociators at Tein-sin.

‡ The left is the most honourable place in the estimation of Chinese, and as the throne is situate at the north end of the hall, the west is considered the least honourable side.

§ Te-ping is probably a lower area.

he shall offer it up to the officer *Keen-gan*, who having received it, shall ascend to the middle steps to the imperial presence, and kneeling, present it to His Majesty.

After this, the officer *Soo*, and the others, shall conduct the Ambassador and suite through the western folding-door to the inside of the palace, where at Je-ping they shall kneel down, and wait till His Majesty confers upon the King of their country a Joo-ëe.* The officer *Këen-gan* shall receive it, and deliver it to the Ambassador, putting authoritatively all such questions as His Majesty may direct. These forms being over, Soo shall conduct the Ambassador and suite out by the same door at which they entered. At the outside of the door, Soo shall respectfully take charge of the *Joo-ëe* for the Ambassador, and then, as before, lead the persons of the Embassy to the west side of the Altar of the Moon. The crier shall proclaim, "Be arranged." All the persons shall then arrange themselves, and the music shall strike up. It shall next be proclaimed, "Advance and kneel;" the Ambassador and suite shall all advance and kneel. The crier shall proclaim, "Bow the head to the ground, and arise;" the Ambassador and suite looking towards the upper end of the palace, shall then perform the ceremony of three kneelings and nine times bowing the head to the ground.† This ceremony being ended, the music shall stop: the Princes and royal personages, who are permitted to sit, shall conduct the Ambassador and suite to a place behind the western line of persons, where they shall perform once the ceremony of kneeling and bowing to the ground, and then sit down.‡

His Majesty shall then have tea introduced§; the Princes, the Ambassador and suite shall kneel, and bow the head to the ground once. After His Majesty has drank tea they shall return to their seats.

The attending officers shall then confer on all who sit the *Hae-cha* (milk tea), for which all shall perform the Ko-tou once; after drinking the tea they shall also perform it. The immediate attendants on His Majesty shall then proclaim the Peen, and the Princes, the Ambassador and suite, shall rise up. The same word shall next be thrice proclaimed below the steps, and the band shall strike up the tune *Hai-ping*, (subjugation or tranquillity

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* A white stone, in form not unlike a soup ladle. The term Joo-ëe implies, "as you wish."

† This is not merely the Ko-tou, but a repetition of it, in Chinese called San-kweï-keu-kou.

‡ It does not appear that any Chinese joined in this part of the ceremonies.

§ His Majesty alone drinks tea.

manifested,) during which His Majesty shall withdraw to the inner apartments, and the music shall stop.

The Princes, the Ambassador and suite, shall all retire. Soo and Kwang-hwae shall lead the Ambassador and suite to the outside of the Tung-lo-yuen (the garden of social pleasure) to wait for His Majesty's arrival. After he has sat down, they shall be conducted to the western piazza to see a play, and to receive the food and presents to be bestowed by His Majesty.

The banquet and audience of leave were directed to be conducted with ceremonies similar to the above.

These three papers were received from Chang-ta-jin at Tung-chow, 26th August, 1816.

No. 4.

Ceremonies to be observed at the Ambassador's Audience of Leave.

On the day that the English Ambassador takes leave, music and cushions shall be placed in the Hall of Light and Splendour, (as on the preceding occasion).

About 5 o'clock in the morning, His Majesty shall most respectfully be requested to put on the imperial dragon robes, and to ascend the Hall of Light and Splendour.

The Princes, royal personages, Dukes, &c. shall be arranged in two wings within-side the hall, in the same manner as at the presentation.

Whilst the band plays a "glorious subjugation," His Majesty shall ascend the throne.

Soo and Kwang shall conduct the Ambassador and his suite, as on the former occasion, to the west side of the passage by the altar of the moon, where, at the word given, they shall arrange themselves in order.

It shall then be proclaimed, "Kneel;" the Ambassador and his suite shall kneel, and wish His Majesty repose. Soo and the others shall then lead the Ambassador through the western folding partition-door to the level area within the hall, where he shall kneel down, and wait till His Majesty himself confer upon the King of his country court beads, and a purse. Kin-gan shall receive them, and deliver them to the Ambassador, and shall also communicate authoritatively such orders as His Majesty may be pleased to direct on dismissing the Ambassador.

This being ended, Soo and the others shall conduct the Ambassador at the western folding-door to without-side the hall, where Soo shall take in charge for the Ambassador the beads and purse, and then conduct him, as

before, to the west side of the altar of the moon. On the words "Be arranged" being proclaimed, the Ambassador and suite shall arrange themselves standing. The crier shall proclaim, "Advance and kneel;" the Ambassador and suite shall advance and kneel. It shall be proclaimed, "Bow the head to the ground, and arise," the Ambassador and suite shall then, towards the upper end of the hall, perform the ceremony of San-kevei-kew-kou, (thrice kneeling, and nine times bowing to the ground,) and the music shall stop.

The Princes, royal personages, Dukes, &c. shall next conduct the Ambassador and suite to behind the western row of persons, where they shall perform the ceremony once, and sit down.

Whilst His Majesty takes tea, the Princes, &c. with the Ambassador and suite, shall, aside from their seats, kneel and perform the ceremony once. After His Majesty has drank tea, they shall again approach their places and sit down.

The attendants shall then confer upon the Princes, &c. and Ambassador and the rest tea, for which they shall, before and after drinking, perform an act of reverence. They shall then stand up, and the music shall play "subjugation manifested," whilst His Majesty retires to the interior of the palace.

The music shall stop, and the Princes, &c. Ambassador and suite, shall all go out.

No. 5.

Extract from the Peking Gazette of the 15th Day of the 7th Moon of the 21st Year of Kea-king, (4th September, 1816.)

IMPERIAL EDICT.

Upon the present occasion of the English nation sending envoys with tribute, (valuable offerings,) as they could not, when at Teen-sin, return thanks for the feast, agreeably to the regulated form, the conducting them again to their boats, for the purpose of proceeding further north, was the fault of Soo-lin-yih and Kwang-hwae.

When they were at Tung-chow, and had not yet practised the ceremony, the forming a confused and indistinct report, and then conducting them at once to Court, was the fault of Ho-she-tae, and Moo-kih-ting-yih.

Lastly, on the 7th day (29th August), I, the Emperor, issue my orders; and having ascended into the Imperial Hall, and called the envoys to an audience; but the Envoy and suite had travelled from Tung-chow all night,

and had come direct to the Palace gate without stopping by the way at their appointed residence, and their dresses of ceremony not having arrived, they could not present themselves before me: If at that time Ho-she-tae had addressed to me a true report, I, the Emperor, would certainly have issued my commands, and have changed the period of the audience, in order to correspond with their intentions, in thus coming ten thousand miles to my Court. On the contrary, he addressed to me repeated reports, expressed in disrespectful language, in consequence of which the Envoys were sent back, and the ceremonial not completed. The error and mismanagement of Ho-she-tae in this affair is a fault really inexcusable.

But the arrangements for the business of the day were already made, excepting the minister Fo-tsin, who was absent from illness, and Tong-kao and Lea-yin-po, whose attendance had not been required. All the assisting Princes, Dukes, and great officers of the palace, were in waiting in the anti-chamber. Many of them must have been eye-witnesses of the whole affair, and must have known in their hearts that it was their duty to have made a true report of it to me, and to have solicited me to alter the period of the audience; yet they sat immovable while the affair was thus going wrong; though Ho-she-tae was visibly alarmed, and in error, no one stood forward to set him right.

Afterwards when the Imperial audience took place, some persons who knew the truth disclosed Ho-she-tae's errors and irresolutions; but why did they not address me at the time in his stead? — or if they dared not go that length, why did they not at least awaken Ho-she-tae, and cause him to report the truth? Thus it is that their countenances are indeed always placid and composed, but when public business occurs they sit unmoved, and see the failure with indifference. Such conduct, whenever placed in any situation of hazard or difficulty, one cannot behold without sighing deeply.

The affair in which Ho-she-tae has erred is itself a very small one, yet even in this the officers of the court have been destitute of any expedient for the service of their country. For the future let them eradicate all selfish principles, whenever there is any defect of fidelity or public spirit, let no one plead that it is an affair which does not individually concern him. Let all look up, and diligently regulate their conduct according to the true spirit of the admonitions I have repeatedly given them.

Respect this.

N. B. In the latter part of this there are some ambiguous expressions in the original.

No. 6. Referred to in page 208.

Edict addressed to the Viceroy of Canton, dated the 15th Day of the 7th Moon of the 21st Year of Kea-king, (6th September, 1816,) addressed to the Viceroy, Kiang, and Foyuen, Tung of Canton, and received the 5th of the 8th Moon (25th September).

The English Ambassadors, upon their arrival at Tëen-sing, have not observed the laws of politeness, in return for the invitation of the Emperor. — At Tung-chow (four leagues from the Court) they gave assurances of readiness to perform the prostration and genuflexion required by the laws of good manners (of the country); and arrived at the imperial country house (half a league from court), and when we were on the point of repairing to the Hall (to receive the embassy), the first, as well as the second Ambassador, under pretence of ill health, would not appear. We, in consequence, passed a decree that they should be sent away upon their return. We, however, reflecting, that although the said Ambassadors were blamable in not observing the laws of politeness, towards the Sovereign of their country who, from an immense distance, and over various seas, had sent to offer us presents, and to present with respect his letters, indicating a wish to show us due consideration and obedience, contempt was improper, and against the maxim to show lenity to our inferiors; in consequence, from amongst the presents of the said King, we chose the most trifling and insignificant, which are four maps, two portraits, ninety-five engravings; and, in order to gratify him, have accepted them. We, in return, as a reward, presented to the said King a *yu-yu*, a string of rare stones, two pairs of large purses, and four pairs of small ones; and we order the Ambassadors to receive these gifts, and to return to their kingdom, having so enacted in observance of the maxim of Confucius, "Give much, receive little."

When the Ambassadors received the said gifts, they became exceeding glad, and evinced their repentance. They have already quitted Tung-chow; upon their arrival at Canton, you, Kiang and Tung, will invite them to dinner, in compliance with good manners, and will make the following speech to them: —

"Your good fortune has been small; you arrived at the gates of the imperial house, and were unable to lift your eyes to the face of Heaven (the Emperor).

" The Great Emperor reflected that your King sighed after happiness (China), and acted with sincerity ; we therefore accepted some presents, and gifted your King with various precious articles. You must return thanks to the Emperor for his benefits, and return with speed to your kingdom, that your King may feel a respectful gratitude for these acts of kindness. Take care to embark the rest of the presents with safety, that they may not be lost or destroyed."

After this lecture, should the Ambassador supplicate you to receive the remainder of the presents, answer, in one word, " A decree has passed, we therefore dare not present troublesome petitions," and, with decision, rid yourselves of them.

Respect this.

N. B. The orthography of Chinese words, in Roman letters, is not determined ; and, therefore, the same words are spelt differently by different translators, as in this edict " *Kiang*" is elsewhere spelt " Keang," &c. &c.

Yu-yu is, by Mr. Morrison, written *joo-ee.*

No. 7.

Imperial Edict, respecting the Embassy, received privately from General Wang, at Kwa-chow, 18th October, 1816.

His Majesty's pleasure, as follows, has been received with feelings of respect : —

On the day that the English Ambassador came to the gate of the Palace, he said he was sick, and could not attend the imperial residence. It was afterwards discovered, on an investigation being made, that the said Ambassador had travelled during the night from Tung-chow to Pekin, and when he reached the gate of the Palace, the court-dresses which they brought were still on the road, and that he dared not perform the ceremony in his ordinary clothes, and therefore sickness was affirmed. Ho-she-tae did not report clearly the fact, that the time appointed for the audience might be changed, and the ceremony performed. That was an error committed by Ho-she-tae in a direct address to me, which led to sending back the Embassy on the same day.

I, on reconsidering that the said nation had sent a tribute of sincere and entire devotedness from beyond a vast ocean, at the distance of thousands of miles, (original, ten thousand lees,) could not bear to reject their ex-

pressions of veneration and obedience. Hence I again sent down my pleasure, requiring that the most trifling (viz. the very lightest) of the articles of tribute should be presented, and the kindness conferred of receiving them. They are maps, painted likenesses, and prints; three articles. At the same time, I conferred on the King of their country a white precious stone joo-ee, sapphire court beads, and different sized purses, to manifest the idea of "giving much, and receiving little." The Ambassador received them at Tung-chow with extreme joy and gratitude; and also, rather by his manner, contrition and fear.

Of late, within the limits of Che-le (or province of Pekin), he has walked about, or travelled about (or travelled) very peaceably and quietly; hereafter when he shall enter the limits of the Kiang (province of Kiang-nan), let the Viceroy enjoin all the officers who conduct the embassy, still to behave with the civilities due to an Ambassador. They must not allow themselves to behave with insult or contempt.

The Ambassador will, in a few days, arrive at the boundaries of the Kiang. The three provinces Keang-soo, Gan-whay, and Keang-see, are under the control of the appropriate Viceroy. Let that Viceroy communicate information respecting this to the several fooyuens of those provinces. When the embassy enters the limits of the province, let him select civil and military officers, who may take under their command soldiers, and police runners, to conduct safely the embassy.

Do not cause the persons of the embassy to land to make disturbance. Through the whole of the route, let the military be all caused to have their armour fresh and shining, and their weapons disposed in a commanding style, to maintain an attitude formidable and dignified (or majestic).

The said embassy (original, nation) came with the intention of offering tribute; still treat it with civility, and silently cause it to feel gratitude and awe; then the right principles of soothing and controlling will be acted on.

No. 8.

Paper respecting the Embassy, drawn up by the Emperor, explaining his Conduct to the Embassy.

A vermillion edict (*i. e.* a paper written by the Emperor's own hand) has been respectfully received, and is as follows: —

On this occasion the English Ambassador sent to convey tribute, landed at the mouth of the river leading to Teen-sin. It was specially ordered that Loo-king-gĭh and Kwang-hwae should communicate authoritatively the imperial pleasure, that a banquet should be conferred and he the Ambassador be ordered to return thanks for the banquet by performing the ceremony of three kneelings, and nine knocks of the head upon the ground. — If it were performed according to the prescribed rule, then to bring the embassy to Pekin the same day, if the Ambassador did not know how to perform the ceremony, then to report to the Emperor and wait his pleasure.

Their ships are not to be caused to depart; they were to return from Teen-sin by the way they came, and to return to their country by sea. Soo-ling-gĭh and Kwang-hwae purposely acted contrary to the Imperial pleasure, and brought onward the embassy, and they connived at the ships going away in a clandestine manner.

Because the affair was not yet settled, Ho-she-tae, and Moo-kih-tun were ordered to go and meet the embassy at Tung-chow, and there exercise them in the ceremony. To the 6th day of the 7th moon (28th August) was the period limited. If within that period they performed the ceremony, then to bring them forward immediately; if when the time was elapsed they had still not observed the proper forms, then to report to the Emperor and wait his pleasure.

On the 5th Ho-she-tae, and Moo-kih-tang-gih, sent a confused obscure report, and on the 6th brought forward the embassy.

I, the Emperor, at half-past one o'clock descended to the King-ching-tëen (Hall of Diligent Governance), and called these two men to an interview to interrogate them respecting the performance of the ceremony. These two pulled off their caps, and dashed their heads against the ground, saying the ceremony had not yet been practised. When they were again asked, "Since the ceremony was not performed, why did not you report?" Ho-she-tae said, "To-morrow morning, when they enter to see Your Majesty, they must be able to perform agreeably to the proper form." In this the fault of these two men was the same as, or equal to, those who preceded them.

On the morning of the 7th, after breakfast, at half-past five o'clock, I, the Emperor, dictated my pleasure, that I would ascend the Hall, and call the Ambassador to an audience. Ho-she-tae, the first time, reported to me that the Ambassador could not travel fast; when he arrived at the gate my pleasure should be again requested. The next time he reported that the princi-

pal Ambassador was ill, a short delay was necessary. The third time he reported, the principal Ambassador was so ill, he could not come to an interview. I then ordered that the principal Ambassador should go to his lodgings, and a physician be conferred upon him to effect his cure. I then ordered the assistant ambassador to enter to an interview the fourth time. He reported that the assistant ambassadors were both sick; that it must be deferred till the principal Ambassador was recovered, and then they would come together to an interview.

Chung-kwo (China, the central nation) is the sovereign of the whole world. For what reason should contumely and arrogance like this be endured with quiet temper? I therefore sent down my pleasure to expel those Ambassadors, and send them back to their own country, without punishing the high crime they had committed.

As before, Soo-lin-gih and Kwang-hwae were ordered to escort them to Canton, on board their ships.

Within these few days, having called my courtiers together to an interview, I began to find out, that the Ambassador had travelled from Tung-chow directly to a room of the Palace, and that he had been on the road all night. He said, "The court dresses, in which to enter and see majesty, are yet behind; they have not come up yet; how can I, in my ordinary garments, lift up my eyes to the Great Emperor?"

Why did not Ho-she-tae, when he saw me, state these circumstances? or if he forgot, why did he not, during the evening, add to what he had before reported? Or the next day state it early? All these ways he might have taken; but to the last moment, when I was about to ascend the Hall of Audience, he never stated clearly these circumstances. The crime of these two men (Ho and Moo) is heavier than that of Soo-lin-gih. Had they previously stated matters clearly to me, I must have changed the time for calling the Ambassador to an interview, and for his completing the ceremony. I never supposed that a stupid statesman would injure affairs to this extent. I, the Emperor, have really not the face (am ashamed) to appear before the ministers beneath me, who are labourers for the state. It only remains for me to take blame to myself.

As for the crime of these four men, when the board has deliberated and sent up their opinion, I shall decide.

Take this Imperial Declaration, and proclaim it fully to those within

China and beyond it. Let the Mung-koo, Kings, Dukes, and so forth, know it.

Respect this.

No. 9.

Translation of a Paper issued in the Form of a Proclamation, addressed to native Chinese at Ta-tung, in the Province of Gan-whay, respecting the British Embassy.

On the 4th of the 9th moon (Oct. 24.), a letter was received from the Seun-taou (a civil officer), on opening which it reads as follows:

"On the 29th of the 8th moon (Oct. 19.), a document was received from the Chin-taou, saying,

On the 23d of the 7th moon (Sept. 14th), was received with due respect a communication from the noble viceroy Pĕ, on opening which it appears as follows:

The English Tribute-bearer is returning to his country through the interior (of China) by water. Kwang, the salt commissioner at Teen-sin, is appointed by imperial authority to take the oversight and management (of the Embassy) through the whole of the journey. It is also appointed that the Treasurer, Judge, and Major-general of each province be on the boundary of the province, to receive, escort, watch, and restrain (the persons of the Embassy).

When the boats bring up at any landing-place, or a change of boats takes place, let there be a numerous party of police runners appointed, and required to clothe themselves in the jackets bearing the badge of their office: let them join with the military to prevent the populace from coming to gaze, and thereby cause a crowd and clamorous noise: let there be a special oversight and restraint kept up to prevent the loss of any thing. The populace on each bank of the river are not allowed to laugh and talk with the foreigners; nor are women and girls allowed to show their faces.

Further, foreign envoys coming to China are by law prohibited from purchasing books or other articles.

On this occasion the envoys bearing tribute, travelling by water to the south, are not allowed, any one of them, to land at the places which they

pass, nor are they allowed privately (or clandestinely) to make purchases of any commodities. On every occasion let care be taken to prevent. If any of the boatmen dare to purchase for them any books, victuals, or other necessaries, they shall be immediately seized and severely punished.

The above coming before me, the Heën, it is incumbent upon me to issue a Proclamation to make subject fully known to the military people. When the Tribute Envoys' boats come to any place, you people are not allowed to gaze and look, so as thereby to cause a crowd and clamorous noise; nor are you allowed to talk with the foreign Envoys. It is still more necessary that women and girls should retire; they are not allowed to expose their faces, nor go out and look about them: if any dare wilfully to disobey this, they shall be instantly seized and punished. Decidedly no indulgence shall be shown.

A Special Edict.

Paper referred to in page 118.—Note.

"PEKING GAZETTE.—KEA-KING, NINETEENTH YEAR, TENTH MOON, SECOND DAY. (NOVEMBER 13. 1814.)

"ON GOVERNING WITH SINCERITY.

"DRAWN UP BY HIS MAJESTY.

"Govern with truth and sincerity, and order will be the result; if not, then anarchy will ensue. To an individual, a family, even to the Sovereign and the whole Empire, nothing further is requisite than truth.

"At this moment great degeneracy prevails; the Magistrates are destitute of truth, and great numbers of the people are false and deceitful. The Magistrates are remiss and inattentive; the People are all given up to visionary schemes and infernal arts. The link that binds together superiors and inferiors is broken. There is little of either conscience or a sense of shame. Not only do they neglect to obey the admonitions which I give them; but, even with respect to those traitorous banditti, who make the most horrible opposition to me; it affects not their minds in the least degree; they never give the subject a thought. It is indeed monstrously strange! That which weighs with them is their persons and families; the nation and government, they consider light as nothing.

" He who sincerely serves his country, leaves the fragrance of a good name to a hundred ages; he who does not, leaves a name that stinks for tens of thousands of years.

" The utmost limit of man's life, is not more than an hundred years. What hearts have those, who, being engaged in the service of their Sovereign, but destitute of talent, yet choose to enjoy the sweets of office, and carelessly spend their days!

" The means used by the sages, to perfect their virtue, is expressed in one word, " Sincerity." Sincerity! or, in other words, Truth and Uprightness. Let my servants (the officers of the Empire) examine themselves, whether or not they can be sincere; whether or not they can be upright? I fear they will give but a poor account.

" The virtue of the common People, is like the waving grain, (it bends with every wind that blows). If superiors have little truth or sincerity in their hearts, the disorderly intentions of the People will certainly be numerous. Small in the beginning, and not affecting the mass of the People, they gradually increase, till at last the bludgeon is seized, and rebellion and anarchy ensue.

" In ancient times, the heads of rebellion, styled themselves Wang and Te, Kings and Emperors *; but it was never heard in ancient times, that any assumed the name of San hwang, (or the King of Heaven, the King of Earth, and the King of Men †). The hearts of the men of this age are daily degenerating.

" As we are the Superiors of this People, shall we bear not to exert our hearts and strength to the utmost?—shall we not bend under the labour even to lassitude, if we may thereby save a ten-thousandth part?

" If in coming forward, or in retiring, the sole object be personal gain; does a man not lower himself thereby to the common mass; nay, sink low as the filth of the age? Think, what kind of men will future ages describe you! Will they not engrave infamy on your back?

" For every portion of sincerity exerted by the officers of Government, the Nation receives a portion of felicity, and the People are spared a portion of misery. The Prince and the People alike depend on the officers of

* By this it would appear, that some person had recently assumed this title.

† Alluding to the fabulous ages of Chinese History.

Government. The happy state of things in the time of Tang and Yu * was the result of the exertions of the officers of Government.

" Because of my moral defects, I met with the great convulsion which took place the last year. Day nor night can I banish it from my breast. My anxious and constant desire is, to brings things to a well governed state. How shall I dare to be remiss or inattentive to it? But my servants, of late, gradually forget the affair. When I call them into my presence, they say, " There is nothing wrong!"

" O, alas! — The residue of the rebels not yet taken; commotion excited by various reports; to sit down with repose is impracticable. Shall men still treat it with indifference, and allow themselves to say, ' There is nothing wrong!' If this may be endured, what may not be endured?

" I speak with the utmost sincerity of heart, and call upon all the officers of my Court to act with sincerity of heart, and sincerely fulfil the duty of good servants. Thus they will aid my sincere wishes, and accord with my sincere declarations. — If you are able to disregard this, and consider the words of your Sovereign as of no importance, your are indeed harder than the rocks. You are unfit to be spoken to; and the fault of speaking to those who are unfit to be spoken to, devolves on me. But, it will be impossible for you to escape being charged by the pen of the Historian, as false and treacherous deceivers. The distinction betwixt a Patriot and a Traitor is expressed by the two words ' True, False.' In the morning and at night, lay your hands upon your hearts, and you will understand without the aid of words."

The following document shows how assiduous the Tartars are to preserve the distinction betwixt themselves and the Chinese: —

" PEKING GAZETTE.

" The following Imperial Edict has been respectfully received.

" In consequence of some of the Imperial Family taking the names Ho-kwan-paou, and Tsing-yung-tae, I sent down an order requiring them to be changed.

" Yesterday, Yung-see, my Royal Cousin, stated verbally, that a great

* About the year of the world 1700.

many of the Imperial kindred had taken names, containing three characters, and which did not form a Tartar word. He requested that all such should be ordered to change their names. His request is by no means proper. Those under the Tartar Banners, adopting a Chinese name, are not permitted to take three characters.* This is with the intention that they may be distinguished from Chinese names.

"The Sons of the Eight Banners take Tartar names, in which three or four characters are used, and from the change of the termination of a word, they do not well agree with the Tartar language. Of this class, it is difficult to ascertain the number. If they be ordered to change, it will occasion much trouble and confusion and be unsuitable to the dignity of Government.

"It is ordered, that in all these case they act as heretofore. It is unnecessary to deliberate upon it.

"*Respect this.*"

* There are generally three characters in Chinese names.

APPENDIX.—D.

ITINERARY

OF THE

ROUTE OF THE EMBASSY THROUGH CHINA.

Dates, Places, and their Distances in Lee from Ta-coo, at the Mouth of the Pei-ho, to Yuen-min-yuen, and from thence to Canton.

PEIHO.

1816.			Lee.
Aug.	9.	Ta-coo	
	10.		
	11.		190
	12.	Tien-sing	
	13.	Stationary	
	14.		
	15.	Yang-tsun	
	16.	Tsai-tsun	
	17.	Ho-shee-woo	400
	18.		
	19.		
	20.	Tung-chow	
		Stationary till	
Sept.	2.		
	3.		
	4.		400
	5.	Yang-tsun	
	6.	Tien-sing	

			Lee.
Sept.	7.	Stationary	
	8.		
	9.	Tsing-hae-heen	90
	10.		
	11.	Leu-ho-chin	70
	12.	Hing-tsee-chin	70
	13.	Chuen-ho-chin	70
	14.	Po-tou-chin	70
	15.	Leen-chin	70
		Enter the Province of Shan-tung	
	16.	Sang-yuen-chin	70
	17.	Stationary	
	18.	Te-chow	70
	19.	Hoo-ching-heën	70
	20.	Keă-ma-ying	70
	21.	Joo-kou-yih	70
	22.	Lin-tsin-chow	90

IMPERIAL CANAL.

	23.	Wei-kea-wan	70
	24.	Tung-chang-foo	60
	25.	Tchang-tseu-chin	90
	26.	Gan-tsan-sin	70
	27.	Kai-ho-chin	70
		Pass the highest part of the Canal	
	28.	Tsee-ming-chou	100
	29.	Nan-gan-chin	90
	30.	Kea-chin	120
Oct.	1.	Han-chwang-chin	70
	2.	Tai-chwang-chin	83
		Enter the Province of Keang-nan	
	3.	Yaon-wang-chin	110
	4.	Tsaou-ho-chin	50
		Suh-tseen-heën	40
	5.	Ching-king-tsih	110
	6.	Yang-chwang-chin	70
		Cross the Yellow River	
		Matou-chin	15
	7.	Tsing-keang-foo	15
	8.	Hwae-kwang-chin	15
		Hwae-gan-foo	15
		Pao-ying-heën	83

		Lee.
9.	Keai-shou-yih	60
	Kaou-yen-chou	60
10.	Shaou-pih-chin	64
	Yan-cheou-foo	40
	Kao-ming-tsee	20
11. 12. 13.	Stationary.—Change boats	

YANG-TSE-KEANG.

14.	Kwa-chou	20
15. 16. 17. 18.	Stationary Contrary winds	
	Enter the Yang-tse-kiang	
19.	Yen-tchin-heen	50
20.	Lung-tang-yih	40
	Kwan-ying-muh, or Yeu-tsze-he	40
21.	Shea-kwang	20
	Suburbs of Nankin	
22. 23.	Stationary	
24.	Hung-sze-chou	25
26.	Kiang-lin-chin	55
27.	Tseen-szu-tsung	30
	Near Ho-chou	
28.	Stationary	
	Enter the Province of Gan-whuy	
29.	Se-leang-shan	30
30.	Woo-hoo-heën	30
31.	San-shan-keu	45
	Fan-chang-heën	30
	Pan-tsze-kei	25
	Se-kiang-chin	5
Nov. 1.	Sing-kea-chou	50
2.	Tung-ling-heen	20
	Tatung-chin	30

		Lee.
3. 4. 5. 6.	Stationary	
7.	Tchei-chou-foo	35
	Woo-sha-kea	
8.	Stationary	
9.	Tai-tsze-ke	20
	Nan-keang-ke	12
	Yan-gin-foo	68
10.	Kwang-kea-keung	25
	Tung-lea-heën	50
	Whan-yung-chin	40
11.	Stationary	
	Enter the Province of Keang-see	
12.	Ma-tang-shan	30
	Tsaou-kan-shan	20
	Pang-tsih-hien	10
	Kin-keang-lou	30
13.	Stationary	
14.	Pa-lee-keang	30
	Enter the Poyang-hoo	
	Hoo-kou-heën	10
	POYANG-HOO.	
	Ta-koo-shan	30
	Ta-koo-tang	10
15.	Stationary	
16.	Ching-chang-tou	20
	She-se-tang	30
	Nan-kang-foo	10
17.	Stationary	
18.	Lui-shan (Waterfall)	
19.	Valley of the White Doe	
20.	Chu-tcheu	60
	Woo-ching-chou	30

PROVINCE OF KAN-KEANG.

21.	Chang-yeh	60
	Hou-tang	20
	Teaou-she	40

		Lee.
22. 23.	Nan-chang-foo	55
24. 25. 26.	Stationary.—Change boats	
27.	Ho-po-so	
	She-cha	
28.	Seaou-keang-kou	40
	Lung-tou-shan	15
	Tung-chin-heen	10
29.	Yang-tsze-chou	30
	Chang-cho-chin	30
30.	Kin-keang-ko-kow	10
	Tae-yang-chow	30
	Sin-kin-keen	30
Dec. 1.	Stationary	
2.	Tin-ho	30
	Kea-keang-heën	20
	Tung-keang-wan	30
	Foo-kou	10
3.	Kĕih-hway-hëin	40
	Kĕih-gan-foo	35
4.		45
5.	Tae-ho-heen	20
		20
6.	Wan-gan-heen	45
7. 8. 6. 10.	She-pa-tan to Kan-cheou-foo	140
11.	Stationary	
12. 13.	Keu-meu-tang	120
14.	Nan-kăng-hein	60
15, 16, 17.		150
18.	Nan-gan-foo	40

TUNG-HO.

19.	Stationary	
20.	Cross the Mei-lin to Nan-heung-foo	80
21.	Stationary	

		Lee.
22.	- - -	100
23.	- - -	
	Che-kin-keang-kow - -	50
24.	- - - -	50
25.	Shaou-chou-foo - - -	90
26.	Stationary.—Change Boats	
27.	- - - -	160
28.	Yin-ting-heen - - -	70
29.	- - - -	30
30.	Tung-yuen-heën - - -	160
31.	San-hway-hëen - - -	180
January 1.	Arrive at Canton.	

APPENDIX.—E.

METEOROLOGICAL TABLE,

Showing the Variations of the Barometer, Thermometer, and Hygrometer, during the passage of the Alceste from Hong Kong, up the Eastern and Yellow Seas, to the Gulph of Pe-tche-lee.

Date. 1816.	Lat. N.	Long. E.	Hour.	Bar.	Ther.	Hyg.	Wind.	REMARKS.
	China Sea.							On the 14th of July, when this table commences, the Alceste had left Hong Kong sound. The mean of our observations, whilst we remained there, from the 10th to the 13th, gave for the Barometer - 29°. 64′. Therm. - - 81. 5. Hygr. - - 0 Prevailing wind S.W. The south westerly winds were usually accompanied by hazy weather; the northerly winds by clear weather, with occasional squalls, attended by thunder and lightning.
July 14	22° 20′	115° 22′	Noon.	29. 89	85	0	S.W.	
	Straights of Formosa.							
15	22. 44. 10″	117. 31.	———	29. 9	83	15	S.W.	
16	24. 36.	118. 47.	Noon.	29. 76	80	10	S.W.	
	Tung-Hai,							
17	———	———	8 A.M.	29. 80	81	8	S.W.	
	26. 21.	121. 54.	Noon.	29. 80	81	8	S.W.	
	———	———	8 P.M.	29. 78	80	2	S.W.	
18	———	———	8 A.M.	29. 80	79	1	S.W.	
	or							
	29. 1.	1 538.	Noon.	29. 77	78. 5	0	S.W.	
	———	———	8 P.M.	29. 70	79	0	S.W.	
19	———	———	8 A.M.	29. 78	79	3	S.W.	
	30. 51.	153. 50.	Noon.	29. 77	78	1	S.W.	
	———	———	8 P.M.	29. 72	79	0	S.	
20	———	———	8 A.M.	29. 70	78	0	S.W.	
	Eastern Sea.							
	32. 35.	123. 40.	Noon.	29. 70	79	0	S.W.	
	Entering the							
	———	———	8 P.M.	29. 70	78	3	W.	
	Yellow Sea							
21	———	———	8 A.M.	29. 72	75	10	N.	
	33. 53.	124	Noon.	29. 75	76	17	N.E.	
	———	———	8 P.M.	29. 75	76	16	E. by S.	
22	———	———	8 A.M.	29. 69	76	1	S.W. by W.	
	34. 43.	123. 57.	Noon.	29. 70	76	2	S.W.	
	———	———	8 P.M.	29. 73	76	2	N.E.	
23	———	———	8 A.M.	29. 80	76	12	N.W.	
	35. 1.	123.46.	Noon.	29. 81	76	0	S.	
24	———	———	8 A.M.	29. 81	76	0	S.E.	During a heavy fall of rain on the 24th, the Barometer
	———	———	Noon.	29. 80	76	6	N.W. by W.	
	———	———	8 P.M.	29. 70	74	0	S.E.	

Date. 1816.	Lat. N.	Long. E.	Hour.	Bar.	Ther.	Hyg.	Wind.	REMARKS.
July 25	Yellow Sea.							rose to 29° 84′, and the Hygrometer to
	35. 1.	123. 46.	8 A.M.	29. 70	72	0	Calm.	8°; but the Barometer, afterwards fell to
	37. 33.	122: 40.	Noon.	29. 70	74	2	N. W. but nearly calm.	29° 74′ and the Hygrometer to Zero.
	———	———	8 P.M.	29. 68	74	0	S. S. E.	
26	———	———	8 A.M.	29. 70	73	0	S. S. W.	On the 26th, the
	37. 58.	121. 34.	Noon.	29. 7	78	26	W. S. W.	wind being S. W.
	Entering Gulph of Pe-tche-le.		8 P.M.	29. 66	74	0	S. S. W.	Leslie's Hygrometer stood at 0, but sud-
27	———	———	8 A.M.	29. 85	74	12	E. S. E.	denly rose to 30°, on
	38. 11.	120. 20.	Noon.	29. 70	74	27	E. N. E.	the wind going to
	———	———	9 P.M.	29. 70	74	8	S. E. by E.	the northward.
28	———	———	8 A.M.	29. 63	77	0	W. S. W.	
	38. 58.	117. 57.	Noon.	29. 60	80	0	W. by N.	
	Anchorage off the Peiho.		8 P.M.	29. 59	83	2	S.	

APPENDIX. — F.

METEOROLOGICAL TABLE,

BY

Dr. JAMES LYNN.

To Doctor Lynn, who kindly took charge of my instruments during my illness, I am indebted for the following record (the only one saved,) of experiments made on the weight, temperature, and humidity of the air, during any part of our progress through China.

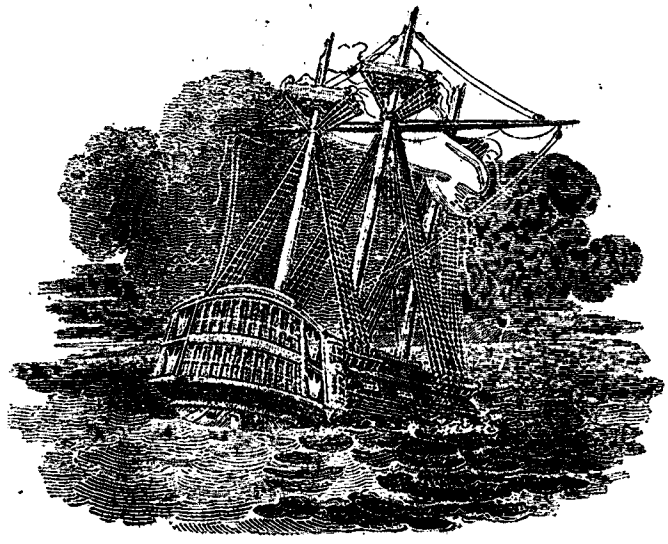
Date. 1816.	Hour.	Therm.	Bar.	Hygr.		Wind.
Sept. 8	7 A. M.	67. F.	29.83	—	—	S. E.
	Noon.	77.				
	6 P. M.	76.				
9	6 A. M.	68.	29.8	—	—	N. W.
	Noon.	79.				
	6 P. M.	76.				
10	7 A. M.	75.	29.76	—	—	S. W.
	Noon.	80.				
	6 P. M.	84.	29.72	—	—	N. E. very heavy dew.
11	6 A. M.	68.				
	Noon.	80.				
	6 P. M.	76.				
12	6 A. M.	70.	29.80	—	—	S. W.
	Noon.	78.				
	6 P. M.	76.				
13	6 A. M.	68.	29.85	—	—	S. E.
	Noon.	82.				
	6 P. M.	80.				
14	7 A. M.	67.	29.81	—	—	N. E.
	Noon.	80.				
	6 P. M.	79.				
15	6 A. M.	65.	29.64	—	—	S. W. to N. W.
	Noon.	82.				
	6 P. M.	80.				

Date. 1816.	Hour.	Therm.	Bar.	Hygr.	Wind.
Sept. 16	6 A. M.	68. F.	29.9	— —	N. E.
	Noon.	77.			
	6 P. M.	75.			
17	6 A. M.	62.	30.10	— —	E. S. E.
	Noon.	74.			
	6 P. M.	70.			
18	7 A. M.	60.	30.14	— —	N. E. 3.36.
	Noon.	72.			
	6 P. M.	70.			
19	6 A. M.	60.	30.16	— —	N. E.
	Noon.	70.			
	6 P. M.	68.			
20	6 A. M.	58.	29.99	— —	S. W. to N. E.
	Noon.	74.			
	6 P. M.	74.			
21	6 A. M.	62.	29.9	— —	N. E. Autumnal Equinox.
	Noon.	73.			
	6 P. M.	70.			
22	6 A. M.	62.	29.9	— —	N. E.
	Noon.	73.			
	6 P. M.	73.			
	6 A. M.	62.	29.7	— —	N. E.
	Noon.	76.			
	6 P. M.	74.			
24	6 A. M.	60.	29.8	— —	S. W.
	Noon.	80.			
	6 P. M.	77.			
25	6 A. M.	58.	29.61	— —	S. W.
	Noon.	80.			
	6 P. M.	76.			
26	6 A. M.	68.	29.7	— —	S. W. to N. E.
	Noon.	74.			
	6 P. M.	72.			
27	6 A. M.	62.	29.88	— —	E. Northerly, slight Rain.
	Noon.	60.			
	6 P. M.	60.			
28	6 A. M.	54.	29.86	— —	Southerly.
	Noon.	65.			
	—	—			
29	6 A. M.	65.	30.	— —	S. E.
	Noon.	68.			
	6 P. M.	66.			
30	6 A. M.	64.	29.97	— —	S. E.
	Noon.	72.			
	6 P. M.	70.			
Oct. 1	6 A. M.	62.	29.95	— —	S. E.
	Noon.	70.			
	6 P. M.	68.			

Date. 1816.	Hour.	Therm.	Bar.	Hygr. L.	Wind.
Oct. 2	6 A. M.	64. F.	29.9	— —	N. E.
	Noon.	74.			
	6 P. M.	72.			
3	6 A. M.	64.	29.9	— —	S.E.
	Noon.	72.			
	6 P. M.	69.			
4	6 A. M.	68.	29.95	— —	S. W.
	Noon.	72.			
	6 P. M.	72.			
5	6 A. M.	66.	29.94	— —	N. E. to S. E.
	Noon.	75.			
	6 P. M.	72.			
6	6 A. M.	64.	29.9	— —	N. E.
	Noon.	74.			
	6 P. M.	72.			
7	6 A. M.	64.	30.	10.	
	Noon.	74.		45.	
	6 P. M.	71.		39.	
8	6 A. M.	64.	29.9	15. at 8 A. M.	S. S. E.
	Noon.	76.		35.	
	6 P. M.	76.		25. at 9 P. M.	
9	6 A. M.	65.	29.94	3.	E. S. E.
	Noon.	70.		14.	
	6 P. M.	70.	29.96	14.	N. E. Rain.
10	7 A. M.	67.	29.98	5.	
	Noon.	58.	30.1	7.	
1	8 A. M.	64.	29.10	15.	
	Canal at Cou-ming-tse.				
12	As yesterday.				
13	The same.				
14	8 A. M.	56.	30.	4.	
	Noon.	65.	35.	25.	
	At Qua Tchoo.				
15	7 A. M.	56.	30.17	4.	W. N. W.
16	8 A. M.	64.	31.15		S. W. North Lat. 32. 40.
	Noon.	69.	30.6	Zero.	
	6 P. M.	50.			
17	10 A. M.	66.	30,5	35.	W.
18	7 A. M.	60.	30.3	10.1	W. N. W.
	Noon.	70.	30.8	70.0	
	Enter the Yang-tse-keang.				
19	7 A. M.	62.	30.3	10.	E. S. E. Lat. N. 32. 11.
	Noon.	70.	30.4	48.	
20	7 A. M.	58.	29.96	10.	S. E. Lat. N. 32. 11.
	Noon.	74.	29.88	43.	
	6 P. M.	66.	29.88	28.	
21	7 A. M.	60.	29.	10.	S. W.

Date 1816.	Hour.	Therm.	Bar.	Hygr.	Wind.
Oct. 21	Noon.	72. F.	29.95	50.3	
	At Nan-King-foo.				
22	7 A. M.	62.	30.	3.	S.
	Noon.	72.	30.1		
23	8 A. M.	60.	30.	5.	S. S. E.
	Noon.	72.	30.5	45.	
24	7 A. M.	60.	30.	Zero.	
	Noon.	62.	30.	45.	
25	7 A. M.	58.	29.98	10.	
	Noon.	64.	29.98	50.	W.
26	7 A. M.	56.	30.5	5.	N. E. Lat. N. 31. 50.
	Noon.	60.	30.10	50.	
27	7 A. M.	61.	30.	18.	E. S. E. Lat. 31. 45. N.
	Noon.	70.	30.2	65.	
28	8 A. M.	62.	29.9	10.	E. S. E.
	Noon.	68.	29.95	45.	
29	7 A. M.	73.	29.96	2.	N. E.
	Noon.	70.	29.96	35.	S. S. E.
30	7 A. M.	60.	30.3	Zero.	E. Lat. N. 31. 22.
	Noon.	68.	30.8	58.	
31	7 A. M.	56.	31.9	Zero.	N. N. W.
	Noon.	60.	30.19	58.	N. E.
Nov. 1	8 A. M.	58.	30.15	25.	Var.
	Noon.	62.	30.13	58.	N.
2	7.	56.	30.13	28.	E.
	Noon.	63.	—	58.	N. E.
3	Noon.	60.	30.13	35.	S. W.
4	8 A. M.	58.	29.95	15.	Calm. Heavy dew.
	Noon.	67.	29.92	50.	S.
5	8 A. M.	60.	29.80	8.	S.
	4 P. M.	76.	29.77	47.	Very warm.
6	Noon.	67.	29.92	25.	S. Rain.
	9 P. M.	64.	30.	5.	S.
7	7 A. M.	63.	30.14	Zero.	N. E.
	Noon.	60.	30.22	3.	Ditto. Strong Wind.
	9 P. M.	58.	30.27		
8	9 A. M.	52.	30.27	Zero.	N. E.
	Noon.	54.	30.22	8.	N. E. Cloudy.
9	8 A. M.	54.	29.99	2.8	N. E. Rain.
	Noon.	56.	30.	5.	N.
10	8 A. M.	54.	30.	3.	N. E.
	Noon.	58.	30.	Below Zero.	Ditto.
11	9 A. M.	58.	30.	Zero.	N. E.
12	9 A. M.	57.	29.90	Zero.	N. E. Cloudy.
	Noon.	56.	29.84	Zero.	
13	7 A. M.	51.	29.98	Below Zero.	W.
	Noon.	56.	29.98	22.	W.
14	7 A. M.	52.	29.96	8.	N. E. Clear.

Date. 1816.	Hour.	Therm.	Bar.	Hygr.	Wind.
Nov. 14	Noon.	58. F.	29.96	15.	
Enter the Poyang-Lake.					
15	—	55.	29.93	Zero.	N. E.
	3 P. M.	56.	29.93	Zero.	N. E. Rain.
16	8 A. M.	50.	30.25	Zero.	N. E. Rain.
	Noon.	49.	30.	18.	N. N. W.
17	8 A. M.	58.	30.18	5.	S. W. Clear. Heavy dew.
18	8 A. M.	50.	30.	— —	S. Hazy.
19	8 A. M.	52.	30.	3.	S. W. Fair.
20	7 A. M.	54.	30.15	12.	N. E. Rain.
	Noon.	54.	30.22	18.	N. E. Clearer.
21	7 A. M.	44.	30.22	2.	N. E.
	Noon.	50.	30.15	40.	N. E. Fine Wind.
22	7 A. M.	46.	30.4	10.	S.
	Noon.	52.	30.4	45.	S. W.
23	7 A. M.	48.	30.20	Zero.	N. E. Fair
24	7 A. M.	48.	30.18	2.	Fair.
Leave the Poyang-Lake.					



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THE END.

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ERRATA.

Page 12. *line* 13. *for* Sensations never, *read* Sensations which I never.
34. *line* 4. *for* below quite bare, *read* below they are quite bare.
35. *note*, *for* See note (B) in Appendix, *read* See Appendix.
40. *line* 15. *for* eight or ten, *read* eighty or a hundred.
50. *line* 13. *for* coagulated, *read* coagulable.
50. *note*, *for* Appendix C, *read* Appendix.
60. *line* 31. *for* from a fern which I believe to be the *Polypodium trichotomum* of Kæmpfer, *read* from the *Polypodium dichotomum* of Thunberg.
60. *note*, for *Icones Kæmpferi. Banks*, read *Flora Japonica*. Pl. 17.
61. *line* 23. for *Polypodium trichotomum*, read *Polypodium dichotomum*.
63. *note*, *for* See Edict I, in Appendix E, *read* See Appendix.
68. *note*, *for* See Appendix F, *read* See Appendix.
108. *line* 3. *for* Chow-ta-jin, *read* Sun-ta-jin.
143. *line* 10. for *caprifolia*, read *caprifolium*.
150. *line* 7. *for* ever, *read* through.
152. *line* 8. *for* white, *read* black.
155. *lines* 3. & 5. for *Paludina*, read *Bithynia*.
160. *line* 18. *for* dying, *read* dyeing.
160. *line* 21. *after* Chinese, *erase* and.
167. *line* 10. for *lanceolatus*, read *lanceolata*.
181. *line* 25. *for* smallest, *read* smallest leaved.
191. *line* 24. *for* former, *read* latter.
203. *line* 17. *for* vegetable, *read* corn.
233. *line* 6. *for* accept, *read* accept it.
244. *lines* 9. & 13. *for* Augustine, *read* Franciscan.
254. *line* 33. *for* suit, *read* suite.
267. *line* 10. *for* payed, *read* paid.
313. *line* 27. for *religiosus*, read *religiosa*.
322. *note, in the measurement of the Orang-Outang, for* 9, *read* 19, as the circumference of its hips.

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